Patient and health care professional views of re-designing services in primary care

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Patient and Health Care Professional Views of Re-Designing Services in Primary Care

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Abstract

Background

Increased pressure, rising demand and cost constraints have driven a need for radical service re-design in the NHS. To deliver re-design objectives it is necessary to understand how they are perceived by service users and providers.

Aim

To investigate the views of patients and health care professionals (HCP) on aspects of health policy and service re-design affecting primary care.

Setting

Patients and HCPs from one geographical area in England.

Method

Themes from phase one qualitative interviews were explored quantitatively using a questionnaire in phase two and a discrete choice experiment (DCE) in phase three. Factor analysis was used to explore HCP responses in phase two. In phase three the DCE was administered to explore patients' relative priorities of a range of attributes.

Results

HCPs had concerns that the Quality Outcomes Framework (QOF) detracted from the patient's agenda and did not improve health outcomes.

GPs felt continuity of care was important Monday through Friday but were not keen on its provision out of hours. Neither did they feel nurses could run chronic disease management clinics without a GP present. Patients felt continuity could be provided by different HCPs for different conditions.

Patients stated continuity of care and consultation duration were the most important attributes in a primary care service. However, in the DCE they prioritised both being seen on the day and by a GP over longer appointments. Patient preference to be seen by a GP may reflect the low uptake of non-medical prescribing in the area.

Conclusion

Continuity of care, while remarked as being important to both HCPs and patients, appears less important when weighted against other primary care service attributes. HCPs appear to want longer consultations whereas patients saw time as encompassing both the time to wait for an appointment and consultation length. For patients, the quality of the time with a HCP may be more important than its duration, additionally patients appear to want choice but not necessarily to choose.

Declaration of Originality

I declare that the information in this thesis is my own work and that it is not being submitted in whole or part in support of an application for another degree or qualification of this or any other university or institute of learning.

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In addition, I would like to thank all the patients and health care professionals who so readily agreed to give up their time and be interviewed; “Edith” for acting as a sounding board and for putting up with my constant interruptions during his working day during the early phase; “Jenks” for making me focus towards the latter phase and my fellow “Witches of Eastwick” – Jen and Catherine - for their support and encouragement (not to mention the wine) when it was all getting too much in most phases. I would like to thank the entire Morris family – Tony, Anne, Harri and Jess – for constantly pushing me on, and……

Finally I would like to extend a very special thank you to my family – Julian, Jordan and Frankie - for their encouragement, understanding and support over the last five years.....sorry, but “it had to be done”.

For the patient who once said to me……..

“But ne’er the rose without the thorn”

Robert Herrick (1591 – 1674)

……At times I wished I had never heard this quote.

List of abbreviations

A&E	Accident and Emergency
AHCP	Alternative Health Care Provider
AHCPwSI	Allied Healthcare Porfessional with Special Interest
APMS	Alternative Provider of Medical Services
BMA	British Medical Association
BMJ	British Medical Journal
BP	Blood Pressure
C&B	Choose and Book
CDM	Chronic Disease Managment
CHD	Coronary Heart Disease
CIC	Community Interest Company
CMP	Clinical Management Plan
COC	Continuity of Care
COPD	Chronic Obstructive Airways Disease
DCE	Discrete Choice Experiment
DES	Directed Enhanced Service
DH	Department of Health
DN	District Nurse
DNA	Did Not Attend
ENT	Ear, Nose and Throat
eCAB	electronic Current Awareness Bulletin
ECG	Electrocardiogram
EPP	Expert Patient Programme
GMS	General Medical Services
GP	General Practitioner (family doctor)
GPwSI	GP (see above) with Special Interest
HCA	Health Care Assistant
HCP	Health Care Professional
HMSO	Her Majesty’s Stationery Office
HTN	Hypertension (high blood pressure)
HV	Health Visitor
IHD	Ischaemic Heart Disease

IT	Information Technology
IP	Independent Prescriber
LES	Local Enhanced Service
LREC	Local Research and Ethics Committee
MeSH	Medical Subject Headings
MFF	Market Forces Factor
MHRA	Medicines & Healthcare products Regulatory Agency
MIU	Minor Injuries Unit
MLwiN	Multilevel modelling software
MRCGP	Member of Royal College of General Practitioners
MUR	Medicines Use review
nGMS	(New) General Medical Services (contract for GPs)
NAO	National Audit Office
NES	National Enhanced Service
NHS	National Health Service
NICE	National Institute for Health and Clinical Excellence
NMP	Non-Medical Prescriber
NPC	National Prescribing Centre
NPF	Nurse Prescriber's Formulary
NVIVO	Qualitative data analysis software package
NwSI	Nurse with Special Interest
OOH	Out Of Hours
PASW	Predictive Analytical Software
PBC	Practice Based Commissioning
PbR	Payment by Results
PCCAG	Primary and Community Care Audit Group
PCT	Primary Care Trust
PCTMS	Primary Care Trust Medical Services
PJ	Pharmaceutical Journal
POM	Prescription Only Medicine
PMS	Personal Medical Services
PwSI	Practitioner with Special Interest
PhwSI	Pharmacist with Special Interest
PMwSI	Practice Manager with Special Interest

QOF	Quality Outcomes Framework
RA	Rheumatoid Athritis
RCGP	Royal College of General Practitioners
REC	Research Ethics Committee
RPhSGB	Royal Pharmaceutical Society of Great Britain
SaLT	Speech and Language Therapist
SDM	Shared Decision Making
SE	Social Enterprise
SP	Supplementary Prescriber
SPSS	Statistical Package for the Social Sciences
STV ratio	Subject to Variable ratio
TW	Textword
UK	United Kingdom
US	United States
WTE	Whole Time Equivalents

The Author

My undergraduate years (September 1981 to July 1984) were spent at the University of Bath. I completed my pre-registration year as a hospital pharmacist at the Royal Berkshire Hospital in Reading, registering with The Royal Pharmaceutical Society of Great Britain in 1985. I then continued to work in secondary care until 1987 when I left to take up a managerial position in a community pharmacy. Within two years I purchased my own pharmacy and I worked as a sole proprietor pharmacist between August 1989 and August 1999.

Within five years of purchasing my business I felt it was sufficiently well established to allow me to spend some time away from the business and develop other areas of professional interest. I thus employed a locum pharmacist two to three days each week whilst I pursued other career options – working, part-time, as both a Health Authority advisor and as a practice based support pharmacist. This latter area of work I found most rewarding and I soon became keen to develop my clinical knowledge further, thus, in 1995, I embarked upon a part-time Master of Science course at the University of Keele. This further stimulated my interest in primary care and I made the decision to sell the business and work on developing the role of the pharmacist within the primary health care team.

My particular interest in the clinical aspects of the pharmacist working in primary care, and the development of non medical prescribing roles, took me back to the University of Bath in 2004 to undertake the course in supplementary prescribing. Subsequently I converted to become an Independent Prescriber in 2007.

Since this time I have worked in Primary Care as the Operations and Development Manager for the response to the H1N1 ‘flu pandemic and adverse weather; Operations and Business Manager for Dentistry and Lead Pharmacist for Care Home Support. Currently I am the Operations and Development Manager for District Nursing (Cotswold locality).

Chapter 1: Introduction

1.1 Introduction

The NHS has failed to keep pace with societal needs and is facing a time of unprecedented change. Increased pressures within primary care, due to an ageing population, increased patient expectations, earlier transfer of care from secondary to primary care, a decrease in the supply of doctors and cost constraints has made radical service re-design necessary. In addition recent Government policy is shifting the emphasis of delivery from a service that is predominantly service provider focused to one that has the service user at its core.

The key document informing service re-design, and the aims of this thesis, is the Department of Health (DH) paper "*The NHS Plan: a plan for investment, a plan for reform"* (Department of Health, 2000a). This document outlines a 10 year strategy for re-structuring and re-organising health care, around the service user, making it both more integrated with social care and better aligned with the private sector. It considers suggestions for quality-based contracts for GPs and advocates changes to traditional roles for nurses and other health care professionals, such as pharmacists. It also outlines proposals to reduce geographical inequalities, to focus on key clinical priorities and to improve the overall health of the nation.

Undoubtedly significant change will result in new experiences for both the professionals working in primary care as well as the recipients of that care – the patients. But to embrace and deliver such a vision it is first necessary to understand how the policy initiatives are perceived and what is important to both the service providers and service users. It is essential to appreciate what constitutes a "quality experience" for both, and what the "trade-offs" are when delivering / receiving such a service from a resource limited system.

Whilst shortage of time is often cited as a pivotal reason for dissatisfaction with the NHS (Ogden et al., 2004) as well as a barrier to

the development of a quality driven (Freeman et al., 2002), patient-focused service (Say & Thomson, 2003), there is still much we don't know about how providers and recipients value the various aspects of time (e.g. consultation duration, access to a health care professionals (HCP), waiting time after the allocated appointment time). In addition it is not clear how time is valued with various HCPs and whether or not patients are willing to trade more time with, for example, the nurse or pharmacist against less time with a general practitioner (GP) and how, if at all, this changes depending upon either the perceived expertise of the professional concerned or how well known they are to the patient. Such "trade-offs" may be further influenced by demographic factors and / or issues pertaining to the nature of the medical condition.

One of the major changes, in recent years, is the introduction of prescribing rights for groups of suitably trained HCPs. These changes to the legislation, as a result of the two Crown Reports (Department of Health, 1989; Department of Health, 1999), challenge the virtual monopoly GPs have held over the prescribing process. They resulted in significant debate within the medical press regarding roles and responsibilities and whether such a move was "*irresponsible and dangerous"* and *"raises patient safety issues*" (Day, 2005) or whether it was a *"major step forward in providing care that is more responsive to the needs of patients and the public"* (Department of Health, 2005c). Studies have demonstrated that nurses and pharmacists are positive about (supplementary) prescribing but that the medical profession is more cautious and may lack awareness or understanding of it (Cooper et al., 2005). Other studies have demonstrated the acceptability to patients, of (independent) nurse and pharmacist prescribing is high, and viewed positively by other HCPs but some doctors remain unclear regarding nurses' and pharmacists' authority to prescribe (Latter et al., 2010). The same study also suggests that, to date, non-medical prescribing (NMP) has largely been driven by individual practitioners and utilised to supplement existing services rather than enable service re-design. For NMP to become exploited to its full potential it is necessary to understand

what some of the barriers are to facilitating it as part of service re-design and preventing its wider application.

The introduction of a quality-based contract for GPs (as outlined in *"The NHS Plan"*) financially rewards practices for delivering clinical and organisational quality through an evidence-based *"Quality Outcomes Framework"* (QOF). Most practices achieve the targets specified within the QOF through a re-distribution of workload. A re-organisation of skill mix and shift in professional boundaries has resulted in many practice nurses taking on increased responsibility for chronic disease management (CDM). In turn nurse time is released through a devolution of many "task-based" skills to less qualified, and cheaper, personnel such as Health Care Assistants (HCAs) and phlebotomists (Charles-Jones et al., 2003). In some practices the extension of prescribing rights to, in particular, practice nurses has been utilised effectively in re-organising the workload, however, this is by no means universal. In addition there is much debate regarding whether or not the introduction of the QOF has resulted in real improvement in overall health outcomes or reduced health inequalities (Dixon et al., 2011). Discussion has centred on whether this has just occurred in some chronic conditions i.e. those clinical areas contained within it (Gubb & Li, 2008), and whether or not it has resulted in an inequity in practice with clinical areas that do not attract QOF points (and hence financial reward) being overlooked (Oliver, 2008). Furthermore the Gubb and Li (2008) study suggested that the QOF may be considered "*medicine-by-numbers"* by introducing a "tick-box" culture in which the interpersonal, patient-centred and holistic approach to health care, that is central to Government policy, is lost. In re-designing services around the service user it is necessary to understand the effect the introduction the QOF has had on attitudes to CDM and whether or not it is detracting from the provision of a patient-centred service. It is also necessary to understand what the attitudes of professionals and patients are to the use of practice nurses in delivering CDM clinics and whether or not the use of NMPs (nurses and / or pharmacists) may be utilised more effectively to achieve this.

A further aspect of the interpersonal issues involved in the delivery of healthcare is continuity of care (COC). Whilst there is evidence to suggest continuity of care is important to patients and increases patient satisfaction (Howie et al., 1999) it has also been demonstrated that this is a complex issue that goes beyond simple relational continuity between a single GP and their patient (Haggerty et al., 2003). With health care becoming more complex a greater understanding of continuity is required: an understanding as to whether a single practitioner should be responsible for all the health care needs of an individual or whether there should be continuity within a single clinical area but differing across co-morbidities. In addition, with NMP now becoming more established, more research is required to consider whether or not traditional preferences to wait and see the GP still exist or whether, for example, access requirements have increased and promptness of access to any health care professional is now preferred.

These were the issues relevant at the start of this programme of work in 2005 and which continued to be relevant throughout the progress of the research.

1.2 Aims

This study aims to investigate the views of patients and health care professionals (HCP) on key elements of recent health policy and service re-design affecting primary care. It considers key aspects of both quality of service (continuity of care, shared decision making, non-medical prescribing (NMP) and the quality outcomes framework (QOF)) and service structure / organisation (consultation duration, access, waiting times and choice of HCP). It is recognised that these themes are not mutually exclusive. Some topics, within the themes, are not strictly organisational or quality. This study will also explore the relative priorities, and trade-offs, patients place on a number of issues (relating to key aspects of health policy re-design: such as speed of access, frequency and duration of consultation, type of professional and continuity of care) when considering choice of service.

To investigate these aims the study will utilise a mixed qualitative and quantitative approach. Part of this will utilise a Discrete Choice Experiment (DCE) to investigate the relative priorities and trade-offs patients place on these issues.

1.3 Plan of work

This thesis begins, in chapter two, with an overview of the relevant literature. This includes the Government papers that followed the *"NHS Plan"* whose subsequent production was to support the delivery of it. Chapter two also outlines the vision for some of the key new services, such as "C*hoose and Book" (C&B), "Practice Based Commissioning" (PBC) and "Payment by Results (PbR)".* It then goes on to consider aspects pertinent to HCPs. Aspects such as the *"(new) GP contract"* (nGMS), *"Quality Outcomes Framework"* (QOF)*, "Non-Medical Prescribing"* (NMP)*, "Out Of Hours" (OOH)* and the development of services for professionals with specialist skills. This chapter concludes by detailing some of the literature regarding aspects of change pertinent to patients – the service users. In particular it outlines the NHS Confederation's response to the consultation document "*Our Health, Our Care, Our Say"* (Department of Health, 2006c). This response paper provides some useful principles to guide Government policy on developing services. Some of these principles, in particular those that encompassed views on time, skill mix and patient centred care, are used to inform phase one of this study.

This programme of work is divided into three distinct phases. The first phase is a qualitative study that looks at the views and opinions of both HCPs (GPs, practice nurses, practice-based pharmacists and practice managers) and patients. The full method is described in chapter three. The aim of this phase was to identify common themes, and the scope of opinion regarding these themes, that are considered important by each group. To capture the perspectives and meanings for each sample group,

this phase utilises open-ended questioning within a semi-structured interview schedule, one schedule for patients and one for HCPs. Both the HCPs and patients were purposefully selected to represent as diverse a population sample as possible. To elicit the patient perspective criteria for selection includes a diagnosis of either hypertension (HTN) or rheumatoid arthritis (RA). These clinical areas were selected for diversity with respect to symptomatic expression of disease, extent of monitoring required and rationale for treatment (e.g. treatment of symptoms or reduction in future morbidity). All interviews were recorded, after obtaining consent, and transcribed verbatim. The full analysis, which utilises a modified grounded theory approach, of the transcripts (using the software package N*DIST NVIVO) is described within chapter four of this thesis.

From the HCP perspective, the QOF, non medical prescribing (in particular roles and responsibilities and skill mix) and provision of routine chronic disease management during the out of hours period (evenings and weekends) were key themes identified during this first phase. Continuity of care, the provision of patient centred care and consultation duration were further important themes identified by both HCPs and patients alike. These are the areas focused on in the subsequent quantitative phases of the research and discussed in chapters five through seven.

Prior to this, chapter four considers these qualitative themes in more detail. HCP respondents felt that the QOF provides a basis for good evidence based medicine but could potentially force a “tick box culture” to medicine and detract from the patient’s agenda – a style contrary to the patient centred approach being advocated within the vision for the new NHS. The HCPs, in particular the GPs, felt that continuity of care is important Monday through Friday but were not keen on providing extended evening or weekend cover. They also did not, generally, feel that other HCPs could run such clinics during these periods without having a GP present. This was just one aspect, of several discussed, that appears to reinforce the hierarchical status of GPs (Weiss & Sutton,

2009; Cooper et al., 2011). A second area was the responsibility for the signing of a prescription and whether or not, when doing so, the signatory needs to have personally assessed the patient. Further areas included consultation duration – the GPs being of the opinion that they were the ones in charge of the consultation and who chose when to end it - and patient centred care. Whilst it was largely agreed that consultations are now more patient centred than perhaps a decade or more ago, there was a disparity between how patient centred the HCPs felt their consultations are and how patient centred the patients felt they are. All of these areas warranted further investigation to assess if the views and opinions expressed are representative of the broader population.

For this reason chapter five moves on to a quantitative investigation. This phase investigates the prevalence, through attitudinal statements developed from quotes obtained in phase one, of the views expressed. The qualitative phase "*taps reality*" (Strauss and Corbin, 1998) and informs the themes for the quantitative phase. This chapter further explores the robustness of the constructs generated and considers the relationships between the views expressed and demographic / professional background. Two separate, but linked, questionnaires were developed – one for HCPs (GPs, nurses and practice based pharmacists) and one for patients. Each questionnaire utilised a five-point Likert based rating scale (strongly agree, agree, no opinion, disagree, strongly disagree). It was hoped that by adopting an overall qualitative and quantitative approach valid findings from a representative sample would be produced.

In chapter six the analysis of the data from the quantitative phase is undertaken. Due to the large number of variables factor analysis was utilised with the HCP data. Rather than test a hypothesis factor analysis takes a large dataset and reduces this to smaller sets of factors or components (Pallant, 2007). It looks for groups of inter-correlations between the variables and considers how these variables "hang together". From phase one, nine key themes emerged and these form the

a priori assumptions i.e. the “before testing” assumptions for the second phase. The nine identified themes were:

i. Generalism versus specialism
ii. Skill mix and deskilling
iii. Roles and responsibilities
iv. Chronic disease management (CDM)
v. Relationships and continuity of care (COC)
vi. Quality Outcomes Framework (QOF)
vii. Non-medical prescribing (NMP)
viii. Specialist clinics and frequency of visits
ix. Consultation duration and patient centred care

These groupings, and the attitudinal statements associated with them, were used to inform the questions for the second phase. To enhance reliability (to test if respondents answered one statement negatively and the opposing positively) if opposing quotes could not be found, but a particular statement was considered interesting, an opposing quotation was developed. All of the questions / statements were designed such that respondents were able to interpret them as stand alone statements and also to ensure that it was reasonable to either agree or disagree with each one. Analysis of these results, presented in chapter six, used reliability testing of statements after the factor analysis of the HCP data to explore the robustness of each component identified. Interestingly, the five components emerging from the factor analysis were slightly different from the original *a priori* themes used to design the questionnaire. These five emerging components are:

i. Weekend working
ii. QOF
iii. Benefits of generalism
iv. Benefits of specialising
v. Clinical responsibility

Chapter six further explores these results by investigating differences in response to each of the five components between various respondent

groupings e.g. between gender responses, age bands and professional group. Unfortunately the response rate for the patient arm of this phase was disappointingly low (at 17.3%) thus no factor analysis was performed on this dataset, demographic and frequency analysis only are detailed.

In chapter seven the third, and final, stage to this programme of work is presented and includes both the Method and Results of a discrete choice experiment (DCE). This phase examines the "trade-offs" patients make when selecting primary care services. Although originally designed for the evaluation of choice of a market product, DCEs have been used increasingly in health economics since the late 1990s when it was realised health was not the only outcome valued by patients. Other issues identified as being important to patients included process issues such as waiting times, duration of consultation, continuity of care and location of that care and, non-health, outcomes such as information, reassurance, patient centred care and dignity (Ryan et al., 2007). DCEs are designed to elicit preferences for different independent variables (or attributes) that are made when choosing a product or service. By varying the levels of each attribute different scenarios are created and respondents then select between, or rank, these scenarios (Louviere et al., 2003). In this DCE a binary discrete response was selected whereby respondents choose between paired scenarios of "visit types" – one that is constant throughout and one in which the levels of various attributes change.

Seven attributes were incorporated into the "visit types". These attributes had all been highlighted, within phase one, as either being of importance to patients or had produced a diversity of views that made them worthy of further investigation. They were also issues embedded within the principles contained within the NHS Confederation's response to the consultation "*Your Health, Your Care, Your Say"* (Department of Health, 2005e). Each attribute was assigned three levels. A complete factorial design of all the combinations of attribute level would be too large thus a fractional design is undertaken. The development of this is described, in

detail, in section 7.3.1.2. A fractional factorial design involves a smaller number of scenarios and assumes independence of the variables (i.e. orthogonality) thus enabling independent estimation of all the main effects. These main effects estimate 70-90% of the interactions (Louviere et al., 2003).

The seven attributes used were:

i. Consultation duration
ii. Waiting times (after the allocated appointment time)
iii. Convenience, to the patient, of the appointment
iv. Type of professional
v. Continuity of care
vi. Specialism
vii. Promptness of appointment (access)

Also included in this phase was a "ranking exercise" that requested patients indicate their order of preference, for each of the seven attributes.

The main findings from this phase indicated that there are differences between patients' stated preferences (as indicated through the ranking exercise) and their actual preferences indicated through their scenario selection in the DCE. It is possible that each of these choices also differ from the actual choices they may make in "real life". In the ranking exercise patients stated that continuity of care *("whether I see the same person"*) was the most important attribute to them. However, in the DCE they were happy to trade this attribute for being able to get an appointment on the same day, being seen by a GP, being seen by any HCP who specialises in their condition and being seen on time. Similarly whilst they stated that "*having enough time during the consultation"* was another important attribute to them, they were found to be willing to trade 20 and 30 minute consultations for every other attribute. Longer appointments did not appear to be highly influential in their choice of "visit type". The DCE demonstrated that the most influential attributes for their

choice of visit type were being seen on the same day and / or being seen by the GP.

In the final chapter, chapter eight, an overall discussion detailing the key findings is presented along with areas for future research and policy. The single most important finding from this programme of work is time, in particular total time (time to access primary care, waiting times and consultation duration) and whether it is the patient who requires more time with their doctor or the other way around. This work, unlike existing literature (Ogden, at al., 2004; Roland, 2002), suggests that it could be the HCP who requires more time with the patient. Another facet of time is the type of time and how this may affect perceived quality of the consultation and satisfaction with it. Innes & Skelton (2005) suggested that time actually consisted of three facets: clock-time (i.e. that which can be objectively measured), “I-time” (the patient’s perceived time) and “subjective-time” (or the way time varies with emotional states such as boredom, suffering, pain or novelty). This is supported by the work of Cape (2002) who suggested that although lack of time is often cited as a concern for patients, measured consultation duration is not associated with patient satisfaction. His work demonstrated that consultations where patients stated higher levels of satisfaction appeared to the patient to have lasted longer (greater “I-time”) but in reality were not actually longer (“clock-time”). In my study longer consultation duration appeared to be the least influential attribute, of the seven studied, in patients’ selections of preferred type of visit.

Other findings suggest that non-medical prescribing was poorly understood and not exploited to its full potential. Despite tacit agreement for the principles of NMP there was little support for it in running CDM clinics during the out of hours (OOHs) periods of evenings and weekends – even though there was strong support for continuity of care. Finally this study demonstrates that patients stated preferences for type of consultation vary markedly with their selected preferences produced from the DCE. Whilst they state, in the ranking exercise, a preference for

continuity of care, they actually rate this less influential than being seen on the day (fast access), being seen by a GP, being seen by any HCP with specialist knowledge in their condition(s) and being seen on time (as per their selected preferences in the DCE).

Despite shifts in Government policy it appears that systems of care currently still focus predominantly on the service provider rather than the service user. Either the current policies do not go far enough or they are not being implemented as intended. This study suggests that a multi-disciplinary team approach to care is necessary and that the skills of both pharmacist and nurse NMPs could be exploited further to maximise their potential. It also demonstrates just how complex health care delivery is, with different interpretations of, in particular, both time and continuity of care and how preferences change with different demographic and clinical profiles. There is no “one size fits all” in health care delivery. Systems that provide flexibility need to be in place however this needs to occur against a backdrop of limited resources and competing demands. More effective utilisation of NMPs within re-designed services, rather than supporting existing services, may be one way to improve access and continuity of care. In doing this it may be possible to have longer appointments – if that is what a particular patient wants. It may be possible to have more flexible appointment systems so that patients could choose the duration of appointment. It may also be possible to provide more flexibility in the time of day, or day of the week, of the appointment by providing services OOH. Either way systems need to provide more flexibility and patients need to be made aware of this flexibility. Different geographical areas will have different requirements but there will need to be a range of options available in all localities. Provision of more multi-disciplinary team working, and training, will help to break down existing professional barriers and encourage a more patient centred approach to care. This could be achieved through joint learning but also through dissemination of best or innovative practice. More work is required to investigate all of these areas but, in particular, there is a marketing opportunity for both nurse and pharmacist NMPs.

Chapter 2: Background - Literature Review

2.1 Introduction

The failure of the NHS to keep pace with societal changes in meeting the needs of the patient has led to a radical rethink of NHS service delivery. The DH document "The NHS Plan: a plan for investment, a plan for reform" (Department of Health, 2000a) heralded the biggest change to health care since the formation of the NHS in 1948. Whereas debate was historically based upon the perspective of the service and the service providers, the emphasis has now shifted towards that of the service users.

To embrace and deliver the objectives of the NHS Plan it is necessary, for service providers, to understand what is important to service users. The providers need to be engaged with the users to be certain that what is being delivered is not delivered to suit them but rather to suit the public or service users. Shortage of time is often cited as a pivotal reason for dissatisfaction with the NHS (Ogden et al., 2004) as well as a barrier to the development of a quality driven (Freeman et al., 2002), patient-focused service (Say & Thomson, 2003). The overarching topic of this thesis is, patient and professional views on, service re-design in primary care - how services may be developed and delivered to be more patient centred whilst optimising capacity without compromising quality of care. The key drivers behind the need for a radical service re-design include increased demand on NHS resources, greater patient expectations and a shift in workload from more traditionally secondary care based activity toward primary care.

To place this study into context with current health policy thinking this chapter will briefly discuss some of the significant Department of Health (DH) papers on the future of the health service and service delivery (section 2.2). It will also outline some of the areas where new ways of working had already been, or were in the process of being, introduced – both from the perspective of the health care professional (section 2.3) and that of the patient (section 2.4).

This thesis focuses on two predominant aspects of innovation:

(1) Organisation / structure of primary care services

(2) Service quality.

These themes are not mutually exclusive. Some topics, within the themes, are not strictly organisational or quality. Regarding organisation / structure this chapter will consider: consultation duration, frequency of visits, waiting times, issues of access and choice (e.g. choice of health care professional) and non medical prescribing (NMP). With respect to service quality it will consider: continuity of care, patient centredness and shared decision making, skill mix and specialism (e.g. the use of professionals with a specialist interest) and the quality outcomes framework (QOF).

Many of the new ways of working outlined in Government policies were being implemented at the time of the thesis (2005 - 2011), services were constantly being adjusted and developed throughout the duration of it. For this reason only policy initiatives which informed the aims and objectives of the thesis will be discussed in section 2.2.

2.1.1 Literature search and critique

The databases MEDLINE (1996+), EMBASE (1996+), PsycINFO and CINAHL (1982+) were searched, for original studies and systematic reviews, in the spring of 2005. As a separate procedure opinion pieces were also sought through weekly (electronic) notifications via a selection of key journals. These notifications included the British Medical Journal (BMJ), The Lancet, The Pharmaceutical Journal (PJ), Nurse Education Today and Nurse Education in Practice (the latter two being via Elsevier notifications).

For database searches the following search terms were used in MEDLINE, with equivalent strategies in the other databases, using Medical Subject Headings (MeSH) or Textword (TW):

- “Consultation length” (MeSH) or “time” (TW) or “appointment” (TW) or “appointments”,

And:

- “Quality of life” (MeSH) or “quality of care” (MeSH) or “beliefs” (TW) or “attitudes” (TW) or “agenda” (TW) or “satisfaction” (TW) or “information” (TW),

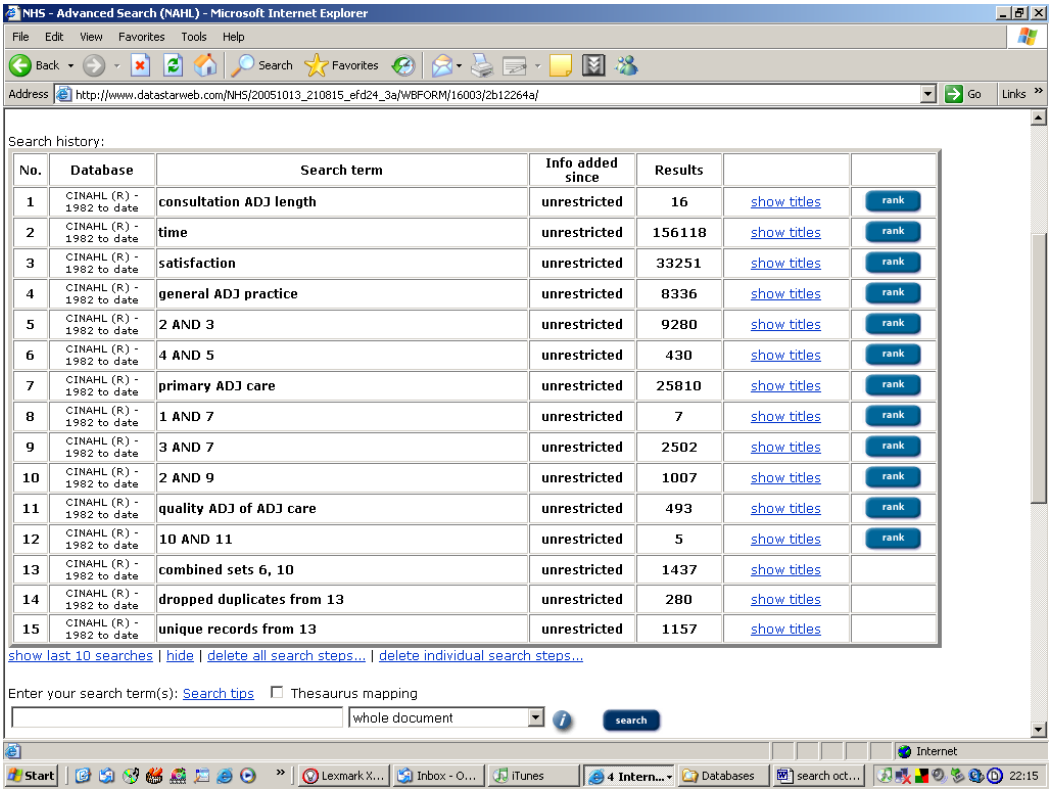
And:

- “General practice” (MeSH) or “primary care” (MeSH)

An example of a CINAHL search is illustrated in figure one overleaf.

This illustrates that initial key phrase searches included “consultation length” (number one), “time” (number two), “satisfaction” (number three), “general practice” (number four), “primary care” (number seven) and “quality of care” (number 11). Results of each of these searches were then combined to elicit papers covering two or more topics, for example, “time”, “satisfaction” and “general practice” (number six) and “primary care”, “satisfaction” and “time” (no. 10).

Figure 1: Example of CINAHL search



NHS - Advanced Search (NAHL) - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://www.datastarweb.com/NHS/20051013_210815_efd24_3a/WBFORM/16003/2b12264a/

Search history:

No.	Database	Search term	Info added since	Results		
1	CINAHL (R) - 1982 to date	consultation ADJ length	unrestricted	16	show titles	rank
2	CINAHL (R) - 1982 to date	time	unrestricted	156118	show titles	rank
3	CINAHL (R) - 1982 to date	satisfaction	unrestricted	33251	show titles	rank
4	CINAHL (R) - 1982 to date	general ADJ practice	unrestricted	8336	show titles	rank
5	CINAHL (R) - 1982 to date	2 AND 3	unrestricted	9280	show titles	rank
6	CINAHL (R) - 1982 to date	4 AND 5	unrestricted	430	show titles	rank
7	CINAHL (R) - 1982 to date	primary ADJ care	unrestricted	25810	show titles	rank
8	CINAHL (R) - 1982 to date	1 AND 7	unrestricted	7	show titles	rank
9	CINAHL (R) - 1982 to date	3 AND 7	unrestricted	2502	show titles	rank
10	CINAHL (R) - 1982 to date	2 AND 9	unrestricted	1007	show titles	rank
11	CINAHL (R) - 1982 to date	quality ADJ of ADJ care	unrestricted	493	show titles	rank
12	CINAHL (R) - 1982 to date	10 AND 11	unrestricted	5	show titles	rank
13	CINAHL (R) - 1982 to date	combined sets 6, 10	unrestricted	1437	show titles	
14	CINAHL (R) - 1982 to date	dropped duplicates from 13	unrestricted	280	show titles	
15	CINAHL (R) - 1982 to date	unique records from 13	unrestricted	1157	show titles	

show last 10 searches | hide | delete all search steps... | delete individual search steps...

Enter your search term(s): Search tips Thesaurus mapping

whole document search

Internet

Start Lexmark X... Inbox - O... iTunes 4 Intern... Databases search oct... 22:15

Selection was limited to English language journal articles, including those from the United States and Canada which, it is realised, have very different primary care models to that of the UK. All studies and articles that considered, in their many guises, the areas of consultation duration (including time), patient satisfaction (including communication, patient centredness and information) and quality were included. Due to the number of papers identified abstracts only were initially read. If, in the objective opinion of the main researcher, the paper covered more than one aspect of the key search terms, or, if the paper contained a particularly innovative idea with respect to use of time and patient outcomes and / or satisfaction the abstract was highlighted to obtain the full paper. Full papers of the selected studies were then obtained and appraised for relevance by the main researcher, with additional papers being identified from reference lists. Relevant papers were briefly summarised, categorised and colour coded using key words and then filed in group order. Some papers covered more than one category and

thus were assigned the appropriate number of “colours”. The categories used were:

- Length / time / duration of consultation (blue)
- Content / information / patient centredness / communication (green)
- Satisfaction (orange)
- Quality (red)
- Miscellaneous (frequency of visits, continuity of care, prescribing issues and compliance / concordance) (yellow)

A number of systematic reviews were identified, however, the majority of the literature consisted of approximately equal numbers of each of qualitative and quantitative (including observational studies) work and opinion pieces. Each “colour group” was then systematically reviewed for the specific theme. This was considered necessary to enable the researcher to focus on individual themes and further sort specific papers.

The literature yielded little work specifically addressing what patients and HCPs wanted from consultations. A significant proportion of work suggested that both groups wanted more time however what was not so clear was what they wanted / expected any additional time to provide them with. It was consequently time, patient expectations and satisfaction that were the initial drivers for the literature reviews.

Papers were included for further investigation if the aims were both clear and considered relevant to the above areas of work. Other criteria for selection considered were whether the design was considered appropriate (e.g. qualitative methodology for understanding subjective experiences and quantitative for understanding the extent, in a wider population, of the hypothesis) and the relevance of the setting (primary care).

Policy documents and associated developments were a further area of inclusion in the literature review – this was separate to the processes outlined above. Relevant documentation was identified for this aspect via

notifications routinely received during normal working practice. In particular daily updates from the National Prescribing Centre (NPC) via their eCAB (electronic Current Awareness Bulletins) notification system. Relevant topics were identified and followed up through the electronic links provided. The majority of these sources were through the Department of Health (DH) and "The King's Fund" websites.

Throughout the duration of the study further studies and policy documents were considered and reviewed for inclusion. These were identified through the notifications detailed above. During the write-up phase (2010) searches were repeated and further studies (in particular those concerning non-medical prescribing (NMP) – of which there were relatively few initially) were included.

2.2 Health Policy Issues – new ways of working

Improved access and the delivery of high quality services are core to the Government's plan for the development of the NHS. This is particularly pertinent to primary care where there were many innovative developments. This section will provide an overview of the key policies that had the potential to impact on how, and where, services were delivered. These policies focused on maximising patient benefits whilst improving the cost efficiency of the service.

The DH document "The NHS Plan: a plan for investment, a plan for reform" (Department of Health, 2000a) outlined the Government's proposal to shape health care around the service user. It described a 10 year process of reform that included suggestions for restructuring and reorganising health to make it more integrated with social care and to consider the development of relationships with the private sector. It also included plans to introduce quality-based contracts for GPs (nGMS – (new) General Medical Services) and to extend roles for nurses and other health care professionals e.g. pharmacists. More specifically the Government paper "Pharmacy in the Future – Implementing the NHS Plan" (Department of Health, 2000b)) outlined its intention for pharmacy

services to play a more pivotal role in the new NHS. This paper considered training (including the extension of prescribing rights) and accreditation of pharmacists, increased integration of pharmacy services with other local services, increased numbers of community pharmacists as well as increased out of hours (OOH) coverage and improved access to pharmacy services, enabling more effective use of medicines. A new system of professional regulation was also proposed.

In addition to outlining changes to the way in which service providers operated, "*The NHS Plan"* considered patient orientated changes. These included proposals to reduce waiting times, provide a more equitable service by reducing geographical inequalities, improve overall health through, for example, healthier eating and smoking cessation and to improve certain service standards (such as access to health care professionals (HCPs)). Finally it outlined what the Government considered to be the key clinical priorities (cancer, heart disease, mental health and services for older people) and, just as importantly, it outlined funding and investment options.

The Government consequently published several other documents that built upon this paper, and the ideals contained within it, and its vision to reshape the NHS to meet patient expectations. The following provides a very brief summary of the subsequent key documents:

"The NHS Improvement Plan: putting people at the heart of public services", (Department of Health, 2004a), detailed the priorities for the NHS between 2004 and 2008. It supported the 10 year strategy outlined in *"The NHS Plan"* and the Government's commitment to transforming the NHS from a "sickness service" to a "health service". It set out the ways in which the NHS needed to change to become patient led.

The areas outlined included a phased introduction of increased choice of provider (from several by 2005 to any provider, including private sector providers, by 2008 (see "Choose and Book" – section 2.2.1)); the use of

different professionals with specialist interests to provide more locally based services (see section 2.3.4); and the development of an “Expert Patient Programme” (EPP), empowering patients to manage their condition(s) (see section 2.4.1).

“Creating a Patient-led NHS – Delivering the NHS Improvement Plan” (Department of Health, 2005a) outlined more ambitious changes that were intended to move the NHS from a service that simply delivered, to a service that was truly patient-led and quality driven. It sought to achieve this through increased patient and front-line HCP engagement. Suggestions for increased patient involvement included more informed decision-making and selection of healthy lifestyle options, in particular by engaging with minority and difficult to access (such as young men) groups. From the HCP perspective it encouraged greater multidisciplinary working, the setting of national standards applicable to all NHS service providers (including the voluntary and private sectors), the transference of financial resources from PCT control to GPs and / or consortia of GPs allowing them to commission services on behalf of the local population (Practice Based Commissioning (PBC) – see section 2.2.2), and, supporting the introduction of a national tariff (i.e. paying a provider for actual activity undertaken rather than through a block contract (Payment by Results (PbR) – see section 2.2.3).

The DH document “Commissioning a Patient-Led NHS” (Department of Health, 2005b) further built on both the previous documents. In particular it considered, in more depth, how services were being commissioned and how they could be commissioned in future to reflect patient choice. It also expanded upon the ideals, within *“The NHS Plan”,* to take integration between health and social care, through PCT reconfiguration arrangements, forward, by suggesting improved *“co-ordination with social services through greater congruence of PCT and local Government boundaries”*. This would be achieved through a reduction in the overall number of PCTs and Strategic Health Authorities (SHAs). This document also increased the pace of change of some of the new initiatives (e.g.

practice based commissioning (PBC) by the end of 2006 (two years earlier than the previously planned date of 2008)).

All of these Government policies helped to shape the direction of travel of the NHS to provide a more patient focused service. However, with so many changes, and such a radical overhaul of how services were to be delivered, there was a need to investigate the grass roots views on service re-design. This chapter will now summarise some of the key policy issues affecting primary care. Firstly it will look at practice issues and then it will go on to consider the key changes from both the perspective of the health care professional working in the service (section 2.3) and the patients (section 2.4) who are the recipients of the care. From the practice perspective this chapter will only highlight the areas that appeared to be widely discussed at the time and those that facilitated the most radical changes most relevant to this thesis. The three areas that will now be looked at in more detail are: Choose and Book (C&B), Practice Based Commissioning (PBC) and Payment by Results (PbR).

2.2.1 Choose and Book

The principle objective of Choose and Book (Department of Health, 2004b) was to offer service users a selection of four or five service providers. These providers could potentially be hospital services (NHS and independent providers) or appropriate alternative service providers such as those with a special interest e.g. GP with Special Interest (GPwSI - see section 2.3.4). It also gave patients the option to select the date and time of their appointment. The selected service provider would (normally) be expected to provide the entire episode of care, including discharge and any out patient follow-up.

The aims of this initiative, from the user's perspective, were to increase the influence the service user had on how, and where, they were treated and to provide them with a broader range of treatment options. It would empower the service user to tailor their treatment to fit with their life, rather than the other way round. From the point of view of the NHS the

aims were to reduce the number of “Did Not Attends” (DNAs) due to referrals being made on inappropriate or inconvenient days / times, to provide a more consistent and less bureaucratic process, and, to reduce burden on services by reducing the number of user enquiries regarding, for example, appointments.

2.2.2 Practice Based Commissioning (PBC)

Practice Based Commissioning (PBC) was first announced in “*The NHS Plan”*. It aimed to promote clinical engagement through the transfer of budgets from PCT level to either individual practice or local practice consortia level. Initially this would be for a small range of services but the intention was to expand the range of services over time, depending upon local population need.

The Government, through its paper “Practice Based Commissioning: Promoting clinical engagement” (Department of Health, 2004c) encouraged PCTs and practices / localities to work together in deciding, and developing, the services that would best benefit their populations. Targets were not outlined in the paper, and it stated very little in the way of “must dos”, however, there was an expectation that all practices would be involved in PBC by December 2006. The driver was to increase efficiency through local innovation, increasing involvement of front line health care professionals in local commissioning decisions. This would extend the variety of services provided and increase patient convenience by delivering them closer to the patient’s home. Initially the PCTs would remain the budget holders but practices / localities could hold an indicative budget for a limited range of services. As practices (or localities) provided, or commissioned, services that patients accessed, so the financial flows would follow. Any surplus funds generated would allow reinvestment and further innovation, providing a more efficient utilisation of public funds and hence benefits to both the NHS and the general public. It was hoped that, over time, the range of services would broaden to ultimately include all aspects of health care.

In 2007 the DH commenced a formal evaluation of PBC. It demonstrated that PBC could work well – with some innovative practices being listed. However, the innovative practices were largely confined to a small number of GPs and practices with the majority not really engaged - despite the fact the majority of GPs felt it would help improve patient care (King's Fund and NHS Alliance, 2007). Various reasons for the slow progress were cited by the report. These included, lack of information (in particular financial information) and support from PCTs. Incentive payments were introduced, to encourage uptake, however many practical difficulties remained.

2.2.3 Payment by Results (PbR)

As indicated above, offering the service user a more flexible and responsive service, that not only provided a choice of provider but also a wider range, meant that financial flows also required adjustment. They needed to be more flexible and follow the service user in a timely fashion, plus they had to be sufficiently transparent and robust to deal with a range of different providers – possibly voluntary and independent providers as well as the NHS. To achieve this, the Government proposed a system known as Payment by Results (PbR).

Under PbR providers would be reimbursed for the actual activity undertaken (adjustments being made for case mix) with rewards for efficiency, productivity, provision of choice and sustainable reductions in waiting times. This would replace the rather cumbersome "block payment" agreements that were utilised previously. National tariffs were introduced to set prices for services and standards, ensuring fairer access to funding, with those delivering more activity being paid more. Some regional adjustments were made to allow for fundamental differences in wages and other unavoidable (geographical) service delivery costs (the MFF – Market Forces Factor). It was intended that eventually virtually all activity would be covered by an annually updated national tariff.

The previous sections considered some of the main Government strategic developments, at the time of the study, and how the DH viewed service re-design. Any service development, however, requires the views and opinions of both the service users as well as providers if it is to be successful. The next two sections will consider some of the key issues relating to those of the service providers (section 2.3: The professional perspective) and those of the service users (section 2.4: The patient perspective). As outlined previously it was considered that there were two aspects of innovation: organisational / structure and service quality. Tables 1 and 2 overleaf outline how these two areas "sit" with respect to the service user (patient) and the service provider (professional). This will help to place the next two sections within the context of the study.

Table 1: Organisational / structural areas of pertinence for patients and professionals within the structure of the study

Organisational / structural innovation	Perspective	Section
Consultation duration	Patient	2.4.6
Frequency of visits		
Waiting times		
Access / choice of HCP	Patient	2.4.3 / 2.4.4
NMPs	Professional	2.3.2
OOH	Professional	2.3.3

Table 2: Service quality areas of pertinence for patients and professionals within the structure of the study

Service Quality innovation	Perspective	Section
Continuity of care	Patient	2.4.5
Patient centred care	Patient	2.4.2
Shared decision making	Patient	2.4.2
Skill mix	Professional	2.3.4
GPwSI	Professional	2.3.4
QOF	Professional	2.3.1

2.3 The Professional Perspective

2.3.1 The New Contract for GPs (nGMS) and the Quality Outcomes Framework (QOF)

In 2004 the re-negotiated GP contract was introduced (General Practitioners Committee & The NHS Confederation, 2003). Previous to

this there existed the GMS (General Medical Services) contract and the PMS[1] (Personal Medical Services) contract. The GMS contract was a nationally negotiated contract and the PMS a locally agreed alternative (first introduced in 1998).

After 2004, both of these contracts were re-negotiated, plus two further contracts were introduced: the APMS (Alternative Provider Medical Services) contract and the PCTMS (Primary Care Trust Medical Services) contract. The former contract was introduced to allow Primary Care Trusts (PCTs) to commission additional services from which GMS and PMS practices had opted out (e.g. Out of Hours (OOH) provision). Independent and voluntary sector providers, social enterprises (SE) or traditional providers could all hold APMS contracts. The PCTMS contract enabled PCTs to provide services themselves through the direct employment of staff. Nationally the GMS contract covered more than two-thirds of GP practices. Locally this figure was even higher, thus this is the area that will be concentrated upon in this section.

The new contract for GPs (nGMS) was first introduced in April 2004 with revisions and updates occurring regularly. NGMS enabled service re-design by allowing practices more flexibility in determining the range of services they wished to provide. Under nGMS practices could access funding through the delivery of three types of service: essential, additional and enhanced.

Essential services – would be provided by all GMS practices to deliver continuous holistic treatment and care for patients. These services

[1] PMS - are an alternative method, to GMS, of providing medical services. The piloting of Personal Medical Services (PMS) began in April 1998 as a voluntary option for GPs and other NHS staff to enter locally negotiated contracts as an alternative to the national General Medical Services (GMS) contract. External evaluation of PMS pilots demonstrated that the new arrangements provided greater opportunities for reforming the delivery of primary care. PMS offers choice for GPs and other primary care providers on the contractual arrangements they work under and provides a vehicle to drive local innovation. As with the GMS contract a new PMS contract was negotiated in 2004.

included acute and chronic disease management, health promotion and the management of terminally ill patients.

Additional services outlined a wider range of services that a practice could opt to deliver should they so desire - it was expected that most would. These services included immunisations and vaccinations, minor surgery, maternity care and child health surveillance.

Enhanced services were services that could be commissioned locally, by the PCT, depending upon perceived need. Practices could opt into the delivery of these services. They were more specialised, or higher specification, services involving a health care professional with a specialist interest (e.g. specialist Heart Failure services or extended minor surgery). Enhanced services were further subdivided into three sections: National, Directed or Local.

> National Enhanced Services (NES) - services under national direction with set national specifications;
>
> Directed Enhanced Services (DES) - under national direction but with a minimal set national specification;
>
> Local Enhanced Services (LES) - developed entirely locally in response to a perceived local need.

NGMS also financially rewarded practices for delivering clinical and organisational quality through an evidence-based *"Quality Outcomes Framework"* (QOF). Initially the QOF focused on ten key clinical domains. These domains included: diabetes, asthma and chronic obstructive pulmonary disease (COPD), coronary heart disease (CHD), hypertension (HTN), mental health and epilepsy. Most practices achieved the majority of the targets specified within the QOF. In many cases this was accomplished through a re-organisation of skill mix and shift in professional boundaries, with practice nurses taking on an increased responsibility for chronic disease management (CDM). In turn, nurse time was "released" through the introduction of phlebotomists and health care assistants (Charles-Jones et al., 2003).

Studies have suggested that implementation of the QOF resulted in a real improvement in clinical quality in some areas – namely those chronic conditions contained within it, such as diabetes and asthma (Gubb & Li, 2008). However, not all clinical areas appear in the QOF and this has led to what some consider an inequity in practice, with clinical areas that do not attract QOF points (and hence financial reward) being overlooked e.g. urinary incontinence, osteoporosis and medication rationalisation in older people (Oliver, 2008). In addition there is much debate regarding whether or not the introduction of the QOF has resulted in real improvement in overall health outcomes and whether or not it has reduced health inequalities (Dixon et al., 2011). Other papers have also questioned the evidence-base for some of the clinical standards introduced as part of the QOF e.g. the benefits of depression scoring questionnaires in improving outcomes for patients with depression (Jeffries, 2009). In October 2008 a consultation was launched (Department of Health 2008) that proposed, from 1st April 2009, the National Institute for Health and Clinical Excellence (NICE) would be responsible for reviewing the cost effectiveness and benefits to patients of the indicators associated with the QOF. This was subsequently agreed and implemented.

The study by Gubb and Li (2008) suggested the QOF had helped GPs to apply evidence based principles in a more structured manner. It had improved recording and the use of information technology (IT) and reduced health inequalities. On the downside, however, the study also suggested that the QOF did not deliver real health gain. It claimed QOF paid for quality that already existed but was poorly recorded and / or for workload rather than benefit of the intervention. Perhaps more significantly, the Gubb and Li study suggested that QOF may be considered "*medicine-by-numbers*". It introduced a "tick-box" culture in which the interpersonal, patient-centred and holistic approach to health care, that was central to Government policy, was lost. It claimed sufficient attention was no longer paid to the psychosocial element of medicine - the QOF could form a barrier in the doctor-patient relationship if a patient presented with a problem not relevant to the QOF. It was also suggested

that the QOF led to GPs not registering patients with more complex conditions and / or medical needs (Koshy & Millett, 2008), due to the workload implications versus financial benefits.

2.3.2 Non-Medical (Independent) Prescribing

To support its access agenda, and improve access to medical care, the Government was keen to develop and extend the role of “non medical prescribers” (i.e. prescribers that are not doctors). Historically, only doctors and dentists have been able to prescribe prescription only medicines (POMs) to patients. However the Cumberlege Report (HMSO, 1986) recommended that, suitably trained, community nurses (District Nurses and Health Visitors) should be able to independently prescribe from a limited list of medicines, dressings and appliances suitable for use in community settings.

The first Crown Report (Department of Health, 1989) considered the implications that nurse prescribing raised. Then, in 1992, the appropriate legislation to permit this, limited, district nurse (DN) and Health Visitor (HV) prescribing was passed (Medicinal Products: Prescription by Nurses etc. Act 1992) and prescribing from the NPF (Nurse Prescriber’s Formulary) began at eight pilot sites (one in each NHS region) between 1994 and 1998. A national roll out of the programme, for those DNs and HVs with the appropriate (V100) training, took place between 1998 and 2001. It was known as Nurse Prescribers' Formulary for Community Practitioners. Subsequently, in 2002, the training was updated (V200) and the list of prescribable prescription-only medicines extended.

The second Crown Report (“The prescribing, supply and administration of medicines” (Department of Health, March 1999)) recommended an extension of prescribing rights to cover other groups of nurses and other health care professionals. The new group of prescribers were to be known as "dependent prescribers". The recommendation was for these prescribers to continue a programme of care for a patient after that patient had been assessed by an independent prescriber (i.e. a doctor or

dentist). It was recommended that dependent prescribers should be professionals who were '*authorised to prescribe certain medicines for patients whose condition has been diagnosed or assessed by an independent prescriber, within an agreed assessment and treatment plan'*. It was also recommended that both, dependent and independent, prescribers should have access to the necessary patient records and the importance of clinical reviews by the assessing clinician was highlighted. Subsequently the term 'dependent' was replaced by 'supplementary', although the recommendations were not modified.

Supplementary prescribing enabled qualified nurses (including midwives) and pharmacists to prescribe any medicine (including controlled drugs) within the framework of a patient-specific clinical management plan (CMP). The CMP had to be agreed with a doctor and the patient concerned. The necessary clauses to cover this were covered by the Health and Social Care Act (Department of Health, 2001a). Amendments to the relevant legislation (Prescription Only Medicine order and NHS regulations) allowed supplementary prescribing for the above groups of professionals from April 2003. Further changes to the order and regulations, in April 2005, then enabled three other professions, namely chiropodists / podiatrists, physiotherapists and radiographers to train as supplementary prescribers. Subsequent changes, in July 2005, enabled optometrists to train and register as supplementary prescribers.

The introduction of prescribing rights for allied health care professionals was as a result of increased demand for GP services – due to increased patient expectations, an ageing population and transfer of some traditionally secondary care based activities into the primary care sector. However, it challenged the virtual monopoly GPs had held over the prescribing process. Predictably the suggestion that nurses and pharmacists should be allowed to prescribe caused a lot of debate within the medical press (Horton, 2002; Wang, 2002) – debate based largely upon the adequacy of the proposed training, depth of clinical knowledge of both nurses and pharmacists, erosion of professional boundaries,

common access to records and the need to keep the prescribing and dispensing processes separate.

Problems with preparing CMPs in advance (for supplementary prescribing) and the complexities of Nurse Prescribers' Formulary (and in updating it) led to suggestions that non medical prescribing, in its existing format, was too narrow to realise its full potential and that it was not accessible to all patients who may benefit from it (e.g. in emergency care). Consequently a joint DH / MHRA consultation was undertaken in 2005 to examine options for the future of independent nurse prescribing (DH & MHRA, 2005a). At the same time, a similar consultation examined options for the introduction of independent prescribing by pharmacists (DH & MHRA, 2005b). These proposals aimed to benefit patients by providing a faster and more accessible service as well as greater access to pharmacists' knowledge and expertise.

Post consultation (November 2005) it was announced that Extended Formulary Nurse Prescribers and (pharmacist) independent prescribers would be able to prescribe any licensed medicine for any condition (see below regarding pharmacists and controlled drugs). Implementation of the necessary changes to the medicines and NHS regulations went ahead in the spring of 2006 (whilst the qualitative interviews for phase 1 were being undertaken) (Department of Health, 2006a).

Many of those who initially trained as supplementary prescribers, and who were actively prescribing, undertook conversion courses to become independent prescribers. Supplementary prescribing courses were gradually phased out until only independent prescribers were being trained. The one area that remained difficult was the prescribing of controlled drugs by pharmacists. Due to the slow process of change in the regulations these could still only be prescribed by pharmacists under a CMP – a particular problem for pharmacists wanting to run, for example, pain clinics, or to prescribe methadone for drug addiction services.

The DH heralded the proposal for the introduction of independent prescribing as a "*further step towards a truly patient-led NHS*" (Patricia Hewitt, the then Health Secretary, speaking at the Chief Nursing Officer's conference in London, 10.11.2005) (Pharmaceutical Journal online, 2005). Whereas the decision evoked strong opposition from the British Medical Association (BMA): "*We believe only doctors have the necessary diagnostic and prescribing training that justifies access to the full range of medicines for all conditions*" (Connelly, 2005). Responses from professional leads to the announcement were varied, with opponents claiming the move was "*irresponsible and dangerous*" and "*raises patient safety issues*" (Day, 2005). On the other hand, advocates claimed it would allow "*faster access to medicines and help take the pressure off already over-worked GPs*" (Royal Pharmaceutical Society of Great Britain, 2005) and that "*this is a major step forward in providing care that is more responsive to the needs of patients and the public*" (Department of Health, 2005c). The medical and lay press, for a while, produced a similarly varied array of responses. There were declarations that this introduced a "*24 hour medical supermarket with a Pick and Mix Medication counter open to the public*" (Brooker, 2005) and others requesting doctors to "*descend from your Olympic pedestals*" (Atkins, 2005). There were also appropriately tempered responses that recognised the risks whilst still acknowledging the potential benefits. It was these responses that referred to the patient and how patient-care could benefit and encouraged team working between the professions involved. A key opinion piece acknowledging both risks and benefits was an editorial by Professor Anthony J Avery and Professor Mike Pringle (Avery and Pringle, 2005).

Many of the responses to the DH announcement were ostensibly concerned with patient safety. Yet, even before the announcement, it was widely recognised that both pharmacists and nurses did, to all intents and purposes, prescribe. They assessed patients, diagnosed and generated prescriptions. Prior to the announcement what they did not do was sign

the prescription and accept the legal responsibility for that prescription. They simply took it to a GP to sign, sometimes waiting around outside the consulting room door for several minutes to complete the process. This was recognised by the two Crown Reports and was an area they sought to address.

Since its introduction there have been a number of studies that have looked at the role of the non-medical prescriber (NMP) as well as those comparing the role of both nurse and pharmacist independent and supplementary prescribers. The early studies (i.e. prior to 2006) only considered the role of the extended list and supplementary prescribers – and the associated limitations – whilst more recent studies have considered the role of the independent prescribers. A systematic review of existing literature, from both the UK and other developed countries (Europe, North America, Australasia, Israel, South Africa and Japan), prior to the introduction of supplementary prescribing (Horrocks et al., 2002), demonstrated that patients were at least as satisfied with their first contact being provided by a "nurse practitioner". An acknowledged limitation to the review was, however, the lack of standardised terminology in defining the "nurse practitioner" and their role. This review also demonstrated that the quality of care, in terms of health outcomes, provided by the "nurse practitioner" was similar to that provided by a doctor. Another study, from the Netherlands, demonstrated that the introduction of the "nurse practitioner" did not reduce the GP workload – their skills were utilised as supplements rather than substitutes (Laurent et al., 2004). A review of the UK literature on pharmacist prescribing (Tonna et al., 2007) found that most of the research focused on pharmacists' perceptions of prescribing. There was little published data that focused on stakeholder, economic or clinical outcomes. Further literature reviews (Cooper et al., 2008), on both nurse and pharmacist supplementary prescribing, found that nurses and pharmacists were positive about supplementary prescribing but the medical profession were more cautious and lacked awareness / understanding of it. However, the pharmacist populations interviewed consisted only of trainee and

qualified supplementary prescribing (SP) pharmacists – this may represent a biased sample, as it could be hypothesised that these were more likely to be pharmacists who were positive about the role of the SP pharmacist / nurse. Implementation barriers were identified in the reviews, these included lack of funding as well as physical barriers such as obtaining prescription pads and accessing clinical records. A need for further research was noted.

Subsequent literature reviews, confined to UK, on the first phase of nurse prescribing (Latter & Courtenay, 2004) demonstrated satisfaction with nurse prescribing from both the perspective of the patient as well as the nurse prescriber. Patients cited convenience and speed of access, accessibility and approachability and specialist expertise in specific areas (e.g. skin and wound care) as benefits of nurse prescribing. Whilst the benefits from the prescribing nurses' perspective included: increased autonomy, status and job satisfaction as well as time savings and convenience. Subsequent research has supported the view that independent prescribing (IP) improves access to a health care professional and medicines and also benefits the patient in terms of continuity of care (Strickland-Hodge, 2008).

Self-reported studies, on the appropriateness of the training in preparing nurses for independent prescribing, suggest that the majority of nurse prescribers (83%) felt that their educational programme met their needs either to some extent or completely (Latter et al., 2007a). Both pharmacist and nurse independent prescribers do, however, prescribe within specified clinical areas – usually related to chronic disease management within specified conditions (e.g. asthma and COPD, diabetes or hypertension). Although some use their skills in triage (which can potentially cover a broad range of clinical areas) most NMPs have quite specific areas that they are interested in. For this reason they tend to have undertaken further postgraduate studies in this clinical area. It could therefore be hypothesised that such a practitioner would be expected to have an enhanced level of knowledge, irrespective of their

prescribing training. There is evidence, from non-UK healthcare settings, to suggest that nurse led interventions in hypertension improve health outcomes however, currently, good quality evidence from the UK is lacking (Clark et al., 2010). This study did however identify that the approach to hypertension, by nurses, was more structured - with regular reviews and stepped care. They tended to be more protocol driven.

A UK-based study by Tinelli (Tinelli et al., 2009) demonstrated that whilst patients were receptive to an increased role for pharmacists in drug therapy management, overall they were resistant to change. The study showed that patients, given options, preferred to choose the "dispensing–only" role over one that combined both the prescribing and dispensing roles. Perhaps unsurprisingly this study did, however, demonstrate that overall younger people were less resistant to change. They were therefore more likely to prefer a service that delivered both the prescribing and the dispensing roles than older people. This study also illustrated the potential benefits of utilising a "Discrete Choice Experiment" (DCE) for eliciting patient preferences (see phase three of this thesis (chapter seven). It did however only involve small numbers (N = 204) of participants.

A study that considered the barriers and facilities to the implementation of non-medical prescribing (Buckley et al., 2006) found that a key factor in its success was the strength, or not, of inter- and intra- professional working relationships. Whilst this work was undertaken in the secondary care setting, it could be hypothesised that it also has relevance within primary care. Other, primary care based, studies have demonstrated that to deliver any effective service, and meet ever increasing demands, in primary care there needs to be increased, and improved, inter-professional working and less hierarchical models (Richards et al., 2000). As prescribing rights were extended so too was the debate as to whether or not, in particular, nurses and doctors had overlapping skills and whether primary care should in fact be nurse led (Sibbald & Knight, 2008)

– potentially eroding further the dominance the GP had had within medicine.

At the time of writing an engagement exercise was underway to consider the possibilities of introducing independent prescribing responsibilities for physiotherapists and podiatrists (the closing date for this consultation was the end of November 2010). For the purposes of this research the focus will be on prescribing by nurses and pharmacists only.

2.3.3 Out of Hours (OOH)

Under the nGMS contract (see section 2.3.1) GPs could hand over responsibility, and liability, for providing urgent night and weekend ("Out of Hours" (OOH)) care to their local Primary Care Trust (PCT). The aim was to help halt the recruitment crisis in general practice by benefiting the lives of family doctors. From 1 April 2004 - when the new contract was implemented - GPs could hand over their responsibilities if their PCT was ready and had its OOH services in place. From December 2004 all PCTs had to be ready to take over should GP practices in their area choose to transfer responsibility – the majority did. The money forfeited by GPs, from their earnings in no longer operating an OOH service, was given to PCTs to spend on locum and cover staff.

Although there was a nationally agreed service specification, detailing the service to be provided and the standard to which it was to be delivered, the national guidance did not include a specification of the actual service. It was felt, in line with the direction of travel of the NHS, only individual health communities representing a particular locality could determine the specification of the local service. Thus there were different applications of the service (Grol et al., 2006). Some PCTs chose to commission the whole service from a single provider, whilst others drew on a variety of different providers who, between them, provided the service that best met patients' urgent needs.

Concerns were expressed regarding whether or not PCTs were sufficiently prepared to take on the responsibility of OOH provider, particularly in rural areas (Koralage, 2004). There were also concerns that the use of allied health care professionals such as nurses, pharmacists and paramedics (thus reducing costs), would "*compromise patient care*" (Koralage, 2004) and encourage a less responsible use of the NHS (with more patients attending Accident and Emergency units). Unfortunately a lack of comparative studies before and after PCTs assumed responsibility means this is difficult to analyse. A systematic review of different models of after hours primary medical care services, prior to the 2004 change in responsibility (Leibowitz et al., 2003), demonstrated that workload and costs were reduced with the introduction of telephone triage but patient dissatisfaction increased. The study did not comment on adverse outcomes or effects on attendance at minor injuries units (MIUs). Since the changes in responsibility the National Audit Office has undertaken a review of OOH services (NAO, 2006). It indicated that providers were not meeting all the quality requirements of the service specification (these mostly related to speed of response rather than standards of care). It also demonstrated that the patient experience was generally good, although one in five patients were dissatisfied (again this related more to experience of telephone triage rather than quality of care). In the report case studies and visits revealed much good practice.

Following on from the introduction of the above scheme for urgent night and weekend care it was suggested that GP practices should also be open later in the evening (Royal College of Physicians, 2007), and at weekends, for routine medical care. This would make primary care services more flexible, and accessible, to fit in with patients' busy lifestyles. At the time of writing this debate remained on-going. Although nationally 77.1% of practices had extended their opening hours to accommodate this, locally the figure was slightly more conservative at 67.5% (Department of Health, 2010).

2.3.4 Specialist Services and Extended Roles (Special Interests), Skill mix and deskilling

The Government document “Liberating the talents: Helping primary care trusts and nurses to deliver the NHS Plan” (Department of Health, 2002b) identified the need to develop a broader range of services available through primary care. One such development was a proposal to develop an extended scheme for Health Care Professionals (HCPs) with special interests in a particular clinical activity (see section 2.3.4.1 below). The professional would deliver a clinical service beyond the normal extent of general practice, although not to the level of consultant or specialist, activity. The professional would still maintain their generalist role.

PCTs and practices / localities were encouraged to look at the needs of the local population and to identify potential areas for service development. They were encouraged to consider whether, via the commissioning role, a PwSI (Practitioner with Special Interest) service could deliver a service, to an appropriate standard, more cost effectively than current providers. Early service development areas included: anticoagulation services, diabetes services, heart failure services, dermatology and services for substance misuse. To further support improved access to medical care the Government was also keen to develop and extend the role of “non medical prescribers”.

2.3.4.1 Practitioners with Special Interests (PwSI)

In 2002, GPwSI (termed “gypsies” – GP with a Special Interest) were the first group to implement the scheme for Health Care Professionals (HCPs) with special interests in a particular clinical activity (Department of Health, 2002a).

GPwSI were defined as a "*GP with additional training in a specific clinical area whom takes referrals for the assessment / treatment of patients (outside GMS / PMS) that may otherwise have been referred directly to a secondary care consultant, or who provides an enhanced service for particular conditions or patient groups*" (Royal College of Physicians,

2006a). GPwSI schemes harnessed specialist knowledge and expertise, within primary care, with the intention of providing a more cost-effective service delivered locally to the patient. By developing expert services in the community it was intended that hospital waiting times, and pressure on secondary care services, would be reduced and that such services would augment and diversify the role of the GP, thus aiding recruitment and retention. It also helped to deliver services more locally thus further promoting the ideal of patient centred care – putting the patient first.

In 2002 a framework within which a GPwSI service could be developed was jointly produced by the Royal College of General Practitioners (RCGP) and the DH (Department of Health and Royal College of General Practitioners, 2002). The RCGP was then commissioned (by the DH) to produce specific guidelines for GPwSI in key clinical areas. These areas included, amongst others: epilepsy, diabetes, ENT, palliative care and Coronary Heart Disease (CHD).

The work carried out by the early implementers demonstrated mixed results. Some services demonstrated benefits in terms of cost savings to the NHS (by reducing the number of secondary care referrals) and improved patient access (by delivering services locally). Others were found to be more costly to the NHS but less costly to patients (Coast, 2005). Despite this, other “Practitioners with Special Interests” (PwSI) services were proposed for development, in particular: PhwSI (“Pharmacist with a Special Interest”), NwSI (“Nurse with a Special Interest”) and AHPwSI ("Allied Health Professional with a Special Interest" (e.g. a SaLT (speech and language therapist) - led service for ear, nose and throat (ENT) patients)).

In addition to the development of special interest roles for health-care professionals the DH also suggested developing specialist roles for practice managers (PMwSI), outlined in the document: Implementing a Scheme for Practice Managers with Special Interests (Department of Health, 2005d). This recognised the increasing importance of the practice

manager in the organising of practices, thus realising the full potential of primary care initiatives, such as PBC and aiding practices in successful QOF implementation.

In 2003 the document "Liberating the Talents: Implementing a scheme for nurses with special interests in primary care" (Department of Health, 2003) outlined the potential role for NwSI. Work on developing the national framework for PhwSI started in May 2005 with the final framework published in 2006: Implementing care closer to home – providing convenient quality care for patients: A national framework for Pharmacists with Special Interests (Department of Health, 2006b).

The aim of the NHS reforms was to reduce costs by utilising more effectively the skills of both nurses and pharmacists over doctors. However, the change in skill mix between the professions left many questioning what the necessary skill mix was and how far the role of the general practitioner would be eroded, even to the point where the GP would become deskilled in a particular area (e.g. if antenatal care was taken from GPs and managed by midwives (GP, 2007)). Others called for national standards – both in training and service specifications – as well as for common nomenclature and regulation (Godlee, 2008). Indeed there was concern that the GPwSI themselves would take on more of the generalist GP roles rather than bringing a more primary care centred approach to their specialist areas (Pulse, 2006). Studies on the impact of GPwSI are limited (Boggis & Cornford, 2007).

Studies from other countries, where the role of the “nurse practitioner” (bearing in mind the lack of standard definition of this role) and utilisation of the specialist pharmacist was already established, prior to the introduction of the role within England, have demonstrated an improvement in quality of care (Dennis et al., 2009). Although, in this study, reductions in costs were not realised this was due to a lack of change within the existing funding structures – structures that were significantly different to those within the NHS. One of the barriers to

implementation identified was a reluctance to embrace skill mix. Despite this it was felt that inter-professional working and inter-professional education were key to successful implementation. The need for increased multi-disciplinary team working when trying to establish successful specialist clinics within primary care has also been identified as necessary in other studies (Moffat et al., 2006; Fear & de Renzie-Brett, 2007). The Moffatt study also raised the issue of whether the specialist route was appropriate from the perspective of making the patient's journey more patient-centred and holistic:

> *"... if everybody specialises ... you would go to the diabetic GP, the heart GP, the respiratory GP, and who is left to know the patient as a whole?"* (Primary care nurse (Moffat et al., 2006))

An issue which appears to directly oppose some of the central themes within the key policy documents regarding the new ways of working.

The previous two sections considered some of the main Government strategic developments at the time of the study, and the issues and changes in ways of working from the perspective of the health care professional. Any service development, however, requires the views and opinions of both the service providers and the service users, if it is to be successfully implemented. The next section will consider several key primary care consultation related issues, relevant to the implementation of new ways of working, from the perspective of the patient.

2.4 The Patient Perspective

This section will elaborate key policy issues affecting patients. To understand what is important to service users the Government launched an ambitious consultation process entitled "Your Health Your Care Your Say" (Department of Health, 2005e). The consultation, which closed on 4th November 2005, asked the public, patients, service users, and staff for their views on how to improve the services provided in the community

by both the NHS and social care. Participants were asked what their requirements were to enable them to take care of themselves, feel supported in their daily lives and to be able to access properly co-ordinated care and support. They were also asked their views on areas such as dual registration with a family doctor (for example, near home as well as the workplace) and what would be required to ensure continuity of care within such an approach. Approximately 42,000 people took part in the consultation process. Their responses, together with input from the 100,000 people who contributed to the Adult Social Care Green Paper: Independence, Wellbeing and Choice (Department of Health, 2005f) shaped the January 2006 White Paper, Our Health, Our Care, Our Say (Department of Health, 2006c).

The NHS Confederation's response to the consultation provided some interesting principles to help the Government test proposals on developing services. The response acknowledged that there was no single right answer as to how services should be run and suggested solutions be determined locally. Some of these principles (see those listed below) were used to inform the initial, qualitative, phase of this study. For simplicity only the principles relevant to this piece of work have been listed:

Principle 1 – Patient's time is not free: Services need to be available at more convenient times and places. Appointments should take place at the agreed time. Patients should be able to have all of their needs met in the minimum number of encounters, including imaging and blood tests.

Principle 2 – Integration of services is important: Treat patients not diseases – avoid situations in which specialist providers take responsibility for components of care or a particular disease group.

Principle 3 – Continuity matters: Shared decision making between patient and professionals is important.

Principle 4 – Patients need to be in control: Enable patients to set their own length for appointments.

Principle 5 – Use technology to make care delivery more effective and convenient: Create incentives for e-mail, web and telephone consultations.

Principle 9 – See the most appropriate professional: Longer consultation times with GPs; group visits should be more widely used.

Patient views on these principles have since been explored, in a paper commissioned by The King's Fund: The quality of patient engagement and involvement in primary care (The King's Fund, 2010). One of the key findings from this was that "*general practice does not have a culture of listening to its users*". The paper suggested that one way to improve this was by increasing competition and choice. It also suggested that the most likely way to increase public involvement was through the use of practice based commissioning consortia.

The new GP contract (see section 2.3.1) supported new ideas for how services could be delivered (for example by encouraging the use of technology – see principle five). Also introduced, though not discussed within the scope of this thesis (as community pharmacists did not form a part of the study), was a new contract for community pharmacists. Together both contracts provided a platform from which a radical rethink of service re-design could be provided, to meet the ever increasing pressures on the NHS.

A key group where the needs of patients are particularly important are those with chronic conditions. As the average age of the population increases so too does the problem of chronic disease (Tennison et al., 2008). The move away from the paternalistic approach to health care delivery is, in part, driven by a recognition that patients, in particular those suffering from a long term condition, not only have a common core of

clinical needs to manage their condition, they may also have specific individual needs – which may or may not be clinical. Whilst patients may not be an expert on an individual clinical condition, they are experts on themselves as an individual and what their needs are in managing their condition (Britten & Weiss, 2004) – this will be discussed further is section 2.4.2. Patients may understand the way in which their particular condition presents itself in them better than a health care professional who has the clinical knowledge and experience to guide them. As a result of this, and other wider political and cultural processes that recognised the importance of the patient's perspective, the idea of the "expert patient" was developed.

The concept of the expert patient is that they need not simply be recipients of care but that they should become key decision makers in their treatment process thereby underpinning the values of patient centred care as outlined in *The NHS Plan*. There is also evidence that the involvement of the patient in the decision making process improves medicine-taking ("adherence") (Britten & Weiss, 2004) (this will also be discussed further in section 2.4.2) and results in overall benefits to the patient (e.g. dealing with acute exacerbations and symptom recognition) and consequently the NHS.

The principles detailed above were incorporated into the initial qualitative phase of the study to explore what was important to patients and health care professionals. The following sections detail some of the literature that investigates in greater depth these particular issues.

2.4.1 Expert Patient Programme (EPP)

The Expert Patient programme (EPP) was an NHS initiative, set up in 2001, to enable patients with one or more chronic disease to manage their condition (Department of Health, 2001b). Its aims were to educate patients in managing their condition through the development of five core skills:

1. Problem solving

2. Decision making
3. Best use of resources
4. Effective partnerships with health care providers
5. Taking appropriate action

It is important to recognise the EPP as a partnership. It was not aimed at undermining the expertise of the professional but at improving practitioner-patient relationships. It was considered that by introducing the views and opinions of the patient there could be benefits such as reduced severity of symptoms and improvements in activity, and increased life control, satisfaction and resourcefulness.

The initial EPP pilot study began in 2001 with 62 initial sites (National Primary Care Research and Development Centre, 2003); it was then further extended between 2001 and 2004. An evaluation of the pilot (Department of Health, 2006d) suggested several benefits. These benefits included increased levels of confidence to self-manage symptoms such as pain, tiredness, depression and breathlessness in a significant proportion (on average 46%) of the sample and more effective use of health services (for example, reductions in GP consultations, attendances at accident and emergency (A&E) and the need for outpatient appointments). Participants also reported feeling better prepared for consultations with health professionals and improved adherence with medication, resulting in improved health outcomes and better value-for-money.

The success of the pilot led to a national programme roll out as an “Expert Patient Programme Community Interest Company” (EPP CIC) in 2007. A CIC is a form of Social Enterprise (SE) – a business set up to meet public need where any surplus can be reinvested to further develop public services.

2.4.2 Shared decision making (SDM) and patient centredness

One of the key developments in health care was in shared decision making. Adopting a patient centred approach to consultations was endorsed in many of the key policy documents (such as “Creating a Patient-led NHS – Delivering the NHS Improvement Plan” (Department of Health, 2005a)) and SDM can be seen as one aspect of this.

Traditionally consultation styles adopted a paternalistic style with a “doctor knows best” approach (Coulter, 1999). However, research has demonstrated that adopting a patient-centred practice both improves health outcomes (Coulter & Ellins, 2007) and increases the efficiency of care by reducing the need for both diagnostic tests and referrals (Stewart et al., 2000). Other studies have demonstrated that many patients want to be involved in the decision making process regarding their treatment, and to be informed of alternatives. The benefits in terms of health gain are, however, less clear (Guadagnoli & Ward, 1998). It has been suggested that when patients are informed and supported in taking decisions regarding their treatment there is a reduced risk of litigation (Richards, 1999). Taking this a step further this “*bio psychosocial model of medical care*” could be extended to include the patient’s family and their preferences in planning management strategies (Hegde, 2009).

A patient-focused consultation is particularly important when considering medicine-taking behaviour. There is considerable research on this subject. Evidence suggests that 30-60% of medication is not taken by patients as intended by the doctor (Rogers & Bullman, 1995). Much work has been undertaken to try and improve compliance levels, however, relatively little progress has been made (Haynes et al., 1996). Part of the problem was that the term compliance did not allow for individual patient judgement. It implies a “*deviant behaviour*” (Donovan & Blake, 1992) and reinforces the “*doctor knows best*” attitude to health care. In reality, a patient’s ‘failure’ to take a medicine (or not to take it as prescribed) may be part of a reasoned decision-making process (Barry et al., 2000). For

this reason the traditional, paternalistic, view of medicine taking behaviour has now largely been superseded by the broader concept of "concordance" – in which medicines taking behaviour reflects both the views of the prescriber and the patient, placing the patient at the centre of the consultation. Concordance considers the relevant clinical information whilst focusing upon the views of the patient. In focusing on both the patient's and health care professional's perspective the autonomy of the patient is increased (Royal Pharmaceutical Society & Merck Sharp & Dohme, 1997). It acknowledges and adjusts to the patients' medicine-taking beliefs (Charles et al., 1999; Weiss & Britten, 2003). A concordant approach to medicine taking may simply make regimen adjustments that enable a patient to accommodate effective medicine-taking within their lifestyle, or, it may conclude with a health care practitioner's acceptance that a patient does not wish to take the medicine despite a risk-benefit discussion. Either way there needs to be an informed agreement, between both parties, for the patient to adhere to the agreed course of action.

The importance of concordance has been demonstrated in the work of Britten et al (2000). They found that patients had to feel at ease and be able to discuss issues frankly if they were to divulge their worries and concerns. If this did not happen, misunderstandings that could lead to adverse outcomes (such as non-adherence with medication) could occur. As noted by Britten et al., doctors seemed unaware of the relevance of patients' ideas about medicines for successful prescribing. Indeed one of the most common reasons for failing the consulting skills assessment of the Membership of the Royal College of General Practitioners (MRCGP) examination is an inability to fulfil or demonstrate the shared decision-making component (Siriwardena et al., 2006). In an analysis of the literature on shared decision-making these authors revealed that the development of this area of the consultation required three factors (Elwyn et al., 1999):

1. Increasing the duration of the consultation.
2. Improved ways of communicating risk to patients.

3. An acquisition of new communication skills

However research, utilising a discrete choice experiment (see chapter seven), has demonstrated that whilst patients consider shared decision-making to be important it is not necessarily the most valued attribute of the consultation. "*Having a doctor who listened*" and receiving "*easily understood information*" were both more highly rated than being "*involved in the decision-making process*" (Longo et al., 2006). In addition this study also demonstrated that these three utilities ("*Having a doctor who listened*", "*easily understood information*" and "*involved in the decision-making process*") scored more highly than either "*more information*" or "*more time*". This issue of time in the consultation, and the associated research, will be discussed further in section 2.4.6. The use of Discrete Choice Experiments (DCE) in eliciting patient preferences will be discussed further in phase three of this study (chapter seven).

Most of the evidence on shared decision-making comes from the medical profession. Its application to the non-medical professions (e.g. nurses and pharmacists) is less well established – although one could hypothesise that no difference would be expected. A systematic review of doctor-patient and pharmacist-patient communications (Stevenson et al., 2004) demonstrated that the paternalistic approach was more likely to be the dominant approach adopted by both professions. Similarly work by Latter et al. (2000) demonstrated that nurse-patient communications were also largely paternalistic in their approach. Further research by Latter et al. (2007b) demonstrated that independent prescribing nurses believed they were practising a partnership approach in their prescribing consultations (concordance). In addition most patients felt they experienced at least some of the principles of concordance during their consultations. However, this study also demonstrated some disparity between the espoused theory and the observed practise of concordance.

2.4.3 Access

A key component of the NHS Plan (Department of Health, 2000a) was the timeliness of access - how rapidly a patient could receive an appointment. Access to medical care became a Government priority, attracting both targets and funding. These targets included guaranteed access for patients with non-urgent problems, with either any health care professional (within 24 hours) or with a GP (within 48 hours) by the end of 2004. Despite this patients still complained of having to wait for appointments and not being able to access them at convenient times (Healthcare Commission, 2005). In particular appointments reserved for patients booking on the day (same-day appointments) led to criticisms that patients were less able to book appointments in advance. This was a particular concern for those with complex medical and psychological needs (BBC news, 2004; BBC news, 2005). A study of the relationship between same-day appointments and patient satisfaction revealed that a ten percent increase in the proportion of same-day appointments was associated with an eight percent reduction in the proportion of patients satisfied (Sampson et al., 2008). A US-based study on open-access revealed that its implementation improved access in some practices, but none of the practices were able to achieve same-day access and patient and staff satisfaction. In addition "*DNA (did not attend) rates*" were unchanged (Mehrotra et al., 2008).

Further access targets, monitored and funded through the QOF (see section 2.3.1) were then introduced in 2006 – advanced access. These included the ability to book appointments more than two days ahead, provision of appointments with a preferred GP as well as alternatives to face-to-face contacts (e.g. telephone access). Despite a significant investment of time, energy and financial incentives in both England and the US (where the principles of advanced access originated) studies have demonstrated that advanced access has not reduced primary care workload or improved continuity or care (Salisbury et al., 2007a). The

same study did, however, demonstrate slightly reduced waits for appointments.

Despite claims that access and availability are of prime importance to patients (Murfin, 2001), plus Government policies and targets aimed at improving access, it is not clear that this is the main attribute of concern to patients when approaching a primary care consultation. Research has demonstrated that patients have more complex requirements when accessing primary care services than simply speed of appointment access (Gerard et al., 2008). Salisbury et al. (2007b) demonstrated that patients preferred a choice of appointment over speed of access and suggested that flexibility in appointments systems was necessary to accommodate these different requirements. In the Salisbury study patients did generally prefer to be seen on their day of choice, however, different patient groups had different preferences. Preferences were influenced by factors such as: employment status (those in employment preferred to be seen on a day of their choice), gender (females placed greater importance on being able to see a female doctor or nurse), chronic (versus acute) condition (those with long standing conditions placed greater importance on being able to book appointments well in advance), being able to see a doctor (rather than a nurse) and continuity of care (seeing a particular health care professional) (Salisbury et al., 2007b)). Similarly a study by Rubin et al. (2006) demonstrated that patients only valued waiting time to an appointment, over choice of doctor and choice of appointment time, when the appointment was for a child or for a new presentation of a health problem. In another UK based study it was demonstrated that patients presenting with a “new” condition were willing to wait an additional 3.5 days to see their own GP in preference to a nurse (Turner et al., 2007). It was not, however, clear from this study whether the respondents had had experience of contact with a non-medical prescribing nurse.

Outside the situations of either a child’s appointment or a new presentation, patients preferred to trade-off shorter waiting times for

seeing the GP of their choice or seeing a GP at a time convenient for them (Rubin et al., 2006). As with the Salisbury et al. study (2007b) different patient groups had different preferences and placed different weightings on each attribute. Those in employment weighted choice of appointment time six times more important than promptness of appointment, and those with a long standing illness valued continuity of care (preferring to wait to see their own GP) seven times as much as promptness of appointment. Both groups were willing to wait up to one extra day to realise their preferences. There were also gender and age differences. Women were willing to wait up to two extra days and older patients were willing to wait an extra two and a half days for continuity of care (Rubin et al., 2006). Similarly, a US based study has demonstrated that patients with asthma are significantly more likely to wait for care from their regular physician than to access care from another professional (Love & Mainous, 1999).

2.4.4 Choice

As a sub-section of patient-centred care (see section 2.4.2) choice has become a part of the Government's agenda for modernising the NHS (Department of Health, 2004d). A further example of choice within primary care is the introduction of choose and book (see section 2.2.1). However, as with access (see section 2.4.3 above), the medical literature suggests the desire for choice (e.g. type of HCP seen) amongst patients is variable and is dependent on the decision being made as well as a range of emotional, social and demographic factors. Research has also demonstrated that there is a disparity between actual choice and hypothetical choice: six out of ten patients, compared with one in three members of the general public, would prefer to leave treatment decision to doctors (Degner & Sloan, 1992).

It has been demonstrated that whilst patients may prefer to choose their GP, hospital specialist and service they use, they may not wish to choose their treatment. This is particularly apparent if the decision is complicated (preferring the paternalistic "doctor knows best" attitude) or if they feel

their decision will influence their recovery due to a disruption in their relationship with the health care professional (Fotaki et al., 2008). They may also prefer not to exercise choice, to avoid regret or responsibility for treatment failure, if they are feeling vulnerable, or simply because they do not realise they are able to play an active part in the decision making process (Fotaki et al., 2008).

A qualitative study by Barnet et al. (2008) demonstrated that, when it came to health care, patients valued choice in principle but they preferred having choices over making choices. A distinction between being given the appearance of having choice, rather than the reality of actually having it, was also expressed within this study. A follow-up (quantitative) study, to the Barnett study, backed up these findings (Ogden et al., 2008).

2.4.5 Continuity of care and relationships

As mentioned previously (see section 2.4.3 above) there is evidence to suggest that patients may prefer to wait to see their regular doctor rather than accessing an alternative professional. Continuity of care is important to patients and increases patient satisfaction (Howie et al., 1999). However, as with other aspects of health care delivery, continuity of care has been demonstrated to be a complex issue with a number of different types identified. Traditionally studies have concentrated upon inter-personal continuity, in particular the relationship between a single GP and their patient (also known as longitudinal or relational continuity). More recently continuity of care in terms of both information and management have been suggested as relevant (Haggerty et al., 2003). Haggerty et al. (2003) defined informational continuity as "*the use of information on past events and personal circumstances to make current care appropriate for each individual*"; and management continuity as a "*consistent and coherent approach to the management of a health condition that is responsive to a patient's needs*".

Relatively little research has been conducted investigating the importance of these additional types of continuity from the patient's perspective.

Research has however suggested that flexibility, and understanding, in approach is most likely to meet patient expectations (Boulton et al., 2006). With non-medical prescribing now becoming more established and nurses, and pharmacists, being able to provide continuity of care more research is now required to establish whether or not traditional preferences to wait to see the GP and access requirements still exist.

2.4.6 Consultation duration

The subject of appropriate consultation length has long been a matter of debate for health care professionals, patients and politicians (Commonwealth Fund, 2000; Airey & Erans, 1998; House of Commons Social Service Committee, 1987). With increasing pressure on the publicly funded NHS, and with the public's satisfaction with the NHS in decline (Ferriman, 2000), this is an issue of increasing importance.

Some studies indicate that General Practitioners (GPs) feel under increasing pressure (Morrison & Smith, 2000) due to the demands of the new contract (see section 2.3.1), and increasing patient expectations (Mechanic, 2001). Other studies indicate patients not only expect more of their GPs but, despite the fact consultations times have been increasing over recent decades[2] (Royal College of General Practitioners, 2004) still want more time (Ogden, at al., 2004; Roland, 2002). To support this there are studies that suggest longer consultations lead to improved quality (Howie et al., 1999; Freeman et al., 1997) and a range of better patient outcomes (Freeman et al. 2002) but others suggest consultations do not have to be longer to achieve benefits (Jenkins et al., 2002). There are also studies that indicate although patients do want more time with their GPs, they are aware of time constraints and thus self impose restraints (Pollock & Grime, 2002). The move away from the traditional paternalistic model of medical decision making towards a shared approach also increases the pressure on consultations – extra time is needed in eliciting

[2] In 1990 the average length of consultations in primary care was 8.33mins. By 2003 this had risen to an average of 13.3mins.

patients' preferences and providing appropriate information to enable a patient to make an informed decision (Say & Thomson, 2003). Furthermore it could be argued that the new contract for GPs acts against the patient centred consultation by forcing a "tick box culture" into a ten minute consultation (see section 2.3.1) (Gubb & Li, 2008).

It should be noted that time is not just an issue for general practice in the UK. It is also an issue in the US where the average consultation time is approximately twice that of the UK (Rogers & Bullman, 2005). Additional evidence, also from the US, suggests that, despite their increased duration of consultation, patients often prefer consultations with nurse practitioners because they take even more time and can answer questions and provide explanations more fully (Rogers & Bullman, 2005).

Much of the literature reviewed demonstrated how complex the issues surrounding patients' preferences for primary care consultations are. Just some of the areas that affect these issues include gender, age, duration of the condition and employment status. What was clear was that, from the patient's perspective, "trade-offs" existed. They realised, for example, that there was a conflict between access and continuity of care. They may have to wait longer for an appointment if they wanted that appointment with a particular health care professional. There is a need to investigate both how patients rate choice of health care professional in primary care (GP, NMP or AHCP) against other attributes and what patients consider to be the "trade-offs" they are willing to make. The attributes worthwhile considering were: time to wait for appointments, consultation duration, continuity of care and convenience of appointment time. To elicit what preferences exist, studies involving "Discrete Choice Experiments" (DCE) are becoming increasingly popular. This was a method utilised in phase three of this thesis. The technique, as applied to this study, will be discussed in more detail in chapter seven.

2.5 Concluding remarks for chapter

Throughout the duration of this study there were significant changes to the way in which NHS services were configured. The main drivers behind this were considerable pressure to deliver services even more cost effectively whilst delivering those services closer to the patient in a more patient orientated manner.

Nationally, many Trusts (both primary and secondary care) were forecasting significant overspends. There was increasing pressure on budgets and there was a feeling, by some, of conflicts in meeting statutory obligations (e.g. the cost of implementation of NICE guidance) with the need to "balance the books". Some practitioners, perhaps understandably, viewed new roles for non medical health care professionals (for example the extension of prescribing rights for pharmacists and nurses) as threats rather than opportunities, and the term "cost effective" was often seen as meaning "cheaper" with the feeling that the service standard would fall. Even practitioners who were supportive of the general direction of travel of the new NHS were fearful that sufficient resources, in both time and money, would not be allocated to develop the services in an appropriate fashion and felt there was too much too quickly. Overall this study was conducted during a relatively volatile period for the NHS.

The focus of this study is on service re-design, to include the views of both patients and health care professionals, the trade-offs for patients, as well as the barriers and facilitators required to promote shared decision-making enabling a more patient focused NHS. There may be different issues for different patient groups. Certain groups of patients may wish to adopt a shared-decision making approach whilst others may prefer the paternalistic approach. At present it is not clear if there is a way of anticipating whom is likely to prefer one approach over the other – influences may include age, gender, social class or medical condition / therapeutic group.

Increased pressures on the NHS within primary care, due to an ageing population, increased patient expectations, earlier transfer of care from secondary to primary care, the limited supply of physicians and increasing cost constraints, have resulted in the introduction of new roles and responsibilities for, in particular, nurses and pharmacists (refer to section 2.3.2). Patients now have even more choices to make. There is literature demonstrating the effectiveness of non-medical prescribing in terms of patient satisfaction, quality of care, accessibility and job satisfaction (see section 2.3.2). There is also some literature considering how patients rate the attributes of either a non-medical prescriber (NMP) or an alternative health care professional (AHCP) against that of a GP when accessing primary care appointments (Turner et al., 2007). There is, however, a lack of literature that considers how patients rate choice of HCP against other issues, such as time to wait for appointments, consultation duration, continuity of care and convenience of appointment time.

2.6 Thesis Structure

This work programme has been divided into three discrete phases. The first phase was a qualitative study. It considered the views and opinions of both health care professionals (HCPs) and patients on quality of service (continuity of care, patient-centred care and shared decision making, skill mix and specialism and the QOF) and service structure / organisation (consultation duration, time to appointment, improved access and choice of professional including non-medical prescribers) in general practice consultations. It utilised separate, but related, semi structured interviews which were analysed for common themes and diversity of opinion (see chapters three and four). The extent to which these themes were representative of the views and opinions of the wider population were then explored further in the second, quantitative, phase (see chapters five and six). Finally the study utilised a “Discrete Choice Experiment” (DCE) to elicit the trade-offs, for patients, when accessing primary care consultations (chapter seven).

2.7 Aims and Objectives

2.7.1 Aims

To investigate the views of patients and professionals on key elements of recent health policy and service re-design affecting primary care.

2.7.2 Objectives

2.7.2.1 Phase 1 objectives

- To explore professional and patient views on key aspects of quality of service (continuity of care, shared decision making, NMP and QOF) within primary care.
- To explore professional and patient views on key aspects of service structure / organisation (consultation duration, time to appointment, improved access, choice of professional) within primary care, reflected in recent health policy and potential service re-design.

2.7.2.2 Phase 2 objectives

- To investigate, using a quantitative survey, whether the views of patients identified in phase one are representative of a broader, demographically diverse, population.
- To investigate, using a quantitative survey, whether the views and key themes identified in phase one are representative across / between the different health care professional groups.
- To examine the views and attitudes of patients and HCPs in the following areas: skill mix, non-medical prescribing (NMP), continuity of care, time to consultation, preferred

HCP, consultation duration, access, shared-decision making and waiting times.

2.7.2.3 Phase 3 objectives

- To explore the relative priorities, and trade-offs, patients place on a number of variables (relating to speed of access, type of professional, continuity of care, timing, frequency and duration of consultation and specialisms) when considering choice of service.
- To compare actual preferences of patients, demonstrated by a DCE, with their stated preferences, in a self ranked choice experiment, for the same variables.

Chapter 3: Method - Phase 1: Qualitative Phase

3.1 Introduction

In outlining key changes to the delivery of health care and by focusing upon the needs of the service user, rather than the service provider, the previous chapter set the scene for this programme of work. This chapter will give an account of the development of the first phase, the qualitative aspect, of the study. It provides an overview of the phase one aims and objectives and outlines the method employed. The phase one settings and populations, including recruitment of the patients and health care professionals, are also described.

3.2 Evolution of the study aims and objectives

The overall aim of this study was to explore the views of health care professionals and patients on key elements of health policy and service re-design in primary care. Throughout the study there was considerable interest, and activity, in re-engineering services to provide more cost effective health care closer to the patient. It was clear many of the new ways of working, suggested in health policies at the time of the study (refer to chapter two) would impact upon both time and quality in primary care. Attitudes towards these would therefore be important to elicit in the early phase.

The aim of this phase was to elicit, from both health care professionals and patients, broad views on key aspects regarding new ways of working in primary care and on how consultations were structured and conducted. Identification of key themes would subsequently allow investigation, on a larger scale, using quantitative techniques (refer to chapters five and seven) to assess if a broader population concurred with the identified themes.

3.2.1 Aim

Aim: To investigate health care professional and patient views on key elements of recent health policy and service re-design affecting primary care.

3.2.2 Specific Objectives

Objectives:

1) To explore professional and patient views on key aspects of quality of service (continuity of care, shared decision making and QOF) within primary care.

2) To explore professional and patient views on key aspects of service structure / organisation (consultation duration, time to appointment, improved access, choice of professional) within primary care, reflected in recent health policy and potential service re-design.

3.3 Development of the stages of method utilised

3.3.1 The Setting

My experience of working within primary care indicated there were significant differences, locally, in how GP consultations were organised. Some practices favoured the use of telephone triage to "filter" GP appointments (across the county both GP and nurse led triage processes were used), some maintained individual patient lists and others preferred an open access system. The county also had significant differences in demographics, covering very rural areas as well as densely populated cities and towns with pockets of both deprivation and affluence. Delivering health care services as close as possible to the service user was going to provide a significant challenge to some of the rural areas. On the other hand, some of the more densely populated areas had to face the challenge of agreeing what the need of the local population was and how best to address it. It was considered, in order to identify key threads, views would need to be elicited from a range of health care professionals and patients that represented as broad a cross section of the population as possible.

3.3.2 Qualitative methods

The over-arching subject matter of this thesis is service re-design and the perspectives of both service users and service providers on this. The NHS Plan described a set of concepts aimed at ensuring the service was more focused on the needs of the service user. As many of the new ways of working were being introduced throughout the course of the study there was little evidence as to what views were likely to be elicited.

Qualitative research is appropriate for research concerned with meaning – how people make sense of and experience things (Willig, 2001). A qualitative methodology was therefore considered appropriate for the initial stage as it would enable us to establish what the key issues for health care professionals and patients actually were, and the potential diversity of these views. It would provide us with a "holistic overview" (Miles and Huberman, 1994) of the most commonly held views and beliefs of people "in the field" – both those providing the service and those receiving it. Qualitative techniques are best suited to enabling researchers to familiarise themselves with the setting (Silverman, 1993) prior to quantifying the extent to which any identified themes are held.

There are four major methods used in qualitative research: Observation, analysing texts and documents, interviews and recording / transcribing (Silverman, 1993). Often a combination of methods is utilised (Bowling, 2002). Semi-structured interviews were utilised as it was considered they would provide an appropriate method for eliciting key threads to form the basis of the questionnaire to be utilised in the second phase of this study. The semi-structured design would provide direction whilst giving respondents the time and opportunity to express potentially wide-ranging views. "Open-ended" questions are the most effective route for gathering an "authentic" understanding of people's experiences and views (Silverman, 1993). Themes that emerge from the data ("grounded theory"), rather than speculating or starting with a pre-conceived idea (or applying a theory to the data), are more likely to reflect "real-life", and

provide a more meaningful construct to further investigations (Strauss & Corbin, 1998). The theory that is developed from the data can then be tested by further research. The approach utilised here was ostensibly a modified grounded theory approach – it followed the general principal of a grounded theory approach but not all of the conventions usually applied to grounded theory (such as constant comparative technique and deviant case analysis) were followed.

Analysis in grounded theory involves the reading and coding of text. To facilitate this it was necessary to record the interviews and transcribe them verbatim. The transcripts could be analysed for key threads and the emergent data organised or grouped together into a hierarchical thematic framework. Data analysis will be discussed further in section 3.3.7.

3.3.3 Development of the Topic Guide

Two separate, but related, interview schedules were developed: One for use with the health care professionals (see appendix 1.1) and one for use with patients (see appendix 1.2). It was considered that there would be slightly different issues for each of these groups and the guide was developed to reflect these differences. Each guide included a broad topic as well as prompts for the interviewer to use when trying to establish views. Each schedule was piloted on two individuals who were known to the researcher. The patient schedule was piloted on two patient representatives, who were known to access primary health care services on a regular basis. The health care professional schedule was piloted on one GP and one nurse. Following the pilots minor changes were made to each schedule.

The patient interview schedule was designed to allow patients to express views on the following areas:

- What they want from a consultation (that is, what is important to them).
- Their perceptions of how time is currently used and how this may be changed to improve patient care, and,

- If it is more time that is required, what are the “trade-offs” patients may be prepared to make in order to attain this ideal.

The health care professional interview schedule was designed to identify key themes on the following areas:

- How time in consultations is currently spent.
- What health care professionals (HCPs) think about consultations and patient visits (in terms of both frequency of visits and duration).
- HCPs’ perceptions of how time is used and how this may be changed, if appropriate, to improve patient care, and,
- If it is more time that is required, what HCPs may consider giving up in order to achieve this?

In addition to the interview schedules, information sheets providing additional information for participants (see appendices 1.3 and 1.4) and letters requesting participation (see appendices 1.5, 1.6, 1.7 and 1.8) were also drafted. All the draft paperwork was submitted to the Local Research and Ethics Committee (LREC), as outlined in the following section.

3.3.4 Ethics Application and Approval

Advice from the county research ethics committee (REC) suggested that as the researcher was accessing patients, ethical approval would be required. As the questionnaire for phase two could not be produced until after the completion of phase one, ethics approval was sought for phase one only initially.

A full application to Gloucestershire REC was submitted in August 2005. The application was reviewed, in the presence of the researcher, at the committee’s meeting on 28 September 2005 (REC reference number 05/Q2005/103). Further information and clarification was subsequently requested by the committee. Upon submission of the additional

information a favourable ethical opinion was granted in November 2005 (see appendix 1.9).

3.3.4.1 Key ethical issues

There were considered to be four main areas of ethical concern:

1) Obtaining informed consent,
2) Anonymity of data,
3) Sensitive issues, and,
4) Identification of issues of potential concern

Written consent, from practices, to approach their patients for participation in this study, was obtained. Selected patients were sent letters requesting participation (see appendix 1.6), an information sheet further outlining the study (see appendix 1.10) and a form to complete indicating their willingness, or not, to participate. On the advice of the ethics committee, and to increase credibility of the study, patient letters were sent out on practice headed paper that included details of University of Bath contacts. Information sheets and return forms contained University details only. All forms indicating a willingness to participate, or not, were returned (in an enclosed FREEPOST envelope) to the University.

Participants were identified, recruited and consented as detailed within the method (see section 3.3.6.2). All interviews were recorded and transcribed verbatim. Tapes were coded, to maintain anonymity, and securely stored at the University of Bath.

Sensitive issues were unlikely to arise within the context of this study although some patients may have felt uncomfortable disclosing information regarding the content and / or quality of consultations within their practice. As interviewer, I reassured patients with respect to the anonymity of all information disclosed and did my utmost to put patients at their ease. Should particularly sensitive issues arise it was agreed, between myself and my supervisor, these would be dealt with

sympathetically, using my extensive experience in dealing with patients on a day to day basis as well as my experience in dealing with difficult or embarrassing patient situations. No such situations arose.

If, in my professional opinion, I felt a patient was at potential risk of causing harm to themselves (or others) I agreed to exercise a reasonable duty of care to reduce this risk in accordance with the professional code of conduct for pharmacists. This would be done after the interview to avoid interview bias. Inappropriate disclosures of a non life-threatening nature would be treated anonymously and confidentially. Research subjects were forewarned of my obligation, as a pharmacist, to report unethical behaviour immediately prior to the interview. I would use my professional discretion to discuss any concerns I had with my academic supervisor. If necessary I would also seek independent advice from the Department of Law and Ethics at the Royal Pharmaceutical Society of Great Britain (RPSGB), as it was then. No such situations arose.

3.3.5 Study Participants and Settings

Undertaking the interviews within a range of demographic settings would potentially allow identification of a wide variety of threads. A disadvantage to this approach, however, would be the time taken to undertake the interviews and, in selecting the practices (see section 3.3.5.1), the distance travelled was also a consideration. It was decided that a range of demographic settings would be preferable, allowing a potentially broader range of views and opinions to be identified.

3.3.5.1 Practices

Participants were selected from each of three diverse practices. Three practices would enable a range of backgrounds to be selected without putting too large a workload burden on any individual practice. The practices were purposefully selected, from 18 within the locality, to give as diverse a demographic sample as possible. As the main researcher had previously worked with all 18 practices (providing prescribing advice) she selected and approached the three practices. They consisted of:

Practice 1: Large (list size 11,800+) seven partnered (six whole time equivalents (WTE)) practice situated in an affluent semi rural town.

Practice 2: Medium (list size 6,300+) four partnered (2.67 WTE) practice situated within a deprived area of a large relatively affluent town.

Practice 3: Small (list size 4,400+) three partnered (2.5 WTE) practice within rural location.

None of the practices were dispensing practices.

All three practices were approached by the researcher using a standard letter on University of Bath headed paper (see appendix 1.5). All three practices responded, positively, via the telephone.

3.3.5.2 Health care professionals

It should be noted that, within the context of this study, the definition of a health care professional (HCP) has been used in its broadest sense to include any professional involved in the organisation of patient care within the primary care setting. This included practice managers but not reception staff who, it was felt, would not be directly involved in service re-design issues. The groups of health care professionals selected therefore included GPs, practice nurses and practice managers – these were considered the groups of professionals likely to be impacted by any service re-design. During the planning phase of the study it was considered these three groups of professionals would give a sufficiently broad range of opinions to inform the study.

Pharmacists were not initially included in the study for a number of reasons. Community pharmacists still appeared to be grappling with the various aspects of their new contract and, at least locally, did not appear to be ready to consider a more integral role within the practice setting nor did they appear to be prepared for any major skill mix and / or service re-

design involvement. On the other hand, practice pharmacists had been working within the primary care setting for several years and, in many areas, were an integral part of the practice team. Despite their increasing involvement with practices it remained, at the start of the research, unusual for a practice to directly employ a practice pharmacist. They were more likely to be funded by the Primary Care Trust (PCT), hence their initial exclusion from the study.

At the time the study commenced there was a significant shift, nationally, in the importance of Practice Based Commissioning (PBC) (refer to chapter two) – with the deadline for the signing up process moved forward two years (from 2008 to 2006). As this shift gathered momentum it became apparent that commissioning of pharmaceutical and prescribing services were likely to be pivotal to practices (and / or localities) achieving financial balance. The prescribing element, of the total commissioning budget, was second (in terms of volume) only to the referral element. Many practitioners, however, considered that they had more direct control over the prescribing aspect of the budget than they did over the referral aspect. It became apparent, during the first few HCP interviews, that the practice based pharmacists could potentially become more directly involved in developing practice based services and may have a significant role to play when considering skill mix issues and the commissioning of services. After the first few HCP interviews had been undertaken, it was therefore decided to include the views of practice based pharmacists within the HCP arm of the study.

3.3.5.3 Patients

From the above practices (see section 3.3.5.1), patients were purposefully selected for an active diagnosis of either hypertension (HTN) or rheumatoid arthritis (RA). These clinical areas were selected for diversity with respect to symptomatic expression of disease, extent of monitoring required and rationale for treatment (e.g. treatment of symptoms or reduction in future morbidity). This gave as broad a coverage of potential issues, with respect to structure / organisation and

quality within primary care, as possible (refer to table three below). The rationale for the selection of these conditions will be discussed here.

Hypertension (HTN): is a chronic disease area that many patients, prior to diagnosis, are unaware they have. It is treated with a range of medications that, certainly upon initiation, may cause side effects. The drugs may make the patient feel worse than the condition itself. However, hypertension requires treatment to prevent “an event” (such as heart attack or stroke) that may, or may not, occur in the future. In line with national guidance included within the Quality Outcomes Framework (QOF) (General Practitioners Committee & The NHS Confederation, 2003) it involves a minimum of twice yearly monitoring.

Rheumatoid arthritis (RA): is a painful condition that involves treatment with drug(s) that often have significant side effects. The patient will certainly be aware they have the condition and the drug therapy usually involves intensive monitoring on a regular (often monthly) basis.

The distinction features of these conditions is summarised in table three below.

Table 3: Distinction features for disease groups selected for phase 1

	Symptomatic	**Monitoring**	**Treatment**
HTN	-	+	prevention
RA	++	+++	symptomatic

Within the above clinical domains patients were selected to achieve a balance of men versus women and ages. Three age bands were considered: less than 40 years, 40 - 60 years old and over 60 years. It was hypothesised that this would cover a range of potential issues due to conflicts with work, retirement and social isolation. As this was a preliminary study, exploring patients’ views and opinions, good verbal communication was essential. The study thus excluded patients whom

had difficulty expressing themselves verbally e.g. patients with dementia and any others who were unable to give informed consent. The study also excluded any patients the GP partners felt it may be inappropriate to contact (e.g. recent bereavement).

3.3.6 Recruitment of Sample

3.3.6.1 Health care professional recruitment

After practice agreement had been obtained the researcher made a direct approach to GPs and nurses, within each practice, for participation. In order to reflect a range of views an attempt was made to select participants across age-ranges, genders and differences in working arrangements (i.e. both full-time and part-time workers). All initial approaches were successful.

As the views of practice pharmacists and practice managers might be practice-specific, and therefore enable individual identification, these groups were recruited via an approach to locality-based groups rather than the individual practice approach. Each group of professionals were recruited, by self-selection, via a direct approach to two different localities – one of which represented a rural location and one that was more urban in its demographic. A short presentation, requesting participants, was made at each of the two localities' meetings for both practice managers and practice-based pharmacists.

3.3.6.2 Patient recruitment

There were two main considerations when recruiting, and interviewing, patients:

- Patients felt comfortable discussing service quality issues with the researcher and did not feel pressurised, and,
- The practice-patient relationship was in no way compromised.

The patient selection process was conducted using Read coded[3] searches of patient registers (i.e. a list of patients) rather than by accessing medical records. Initially practice databases for registers of hypertensive and rheumatoid arthritis patients were interrogated. Both lists were exported into an Excel spreadsheet that was sorted into the three age bands outlined above (section 3.3.5.3). Each age band was then further divided by the patient's gender. As these lists were needed so that the partners could eliminate anyone they did not feel would be appropriate for the researcher to approach, and, as such searches were a part of the main researcher's role at the time, there was no anonymity at this stage. By virtue of the fact the partners in practice one held individual patient lists, the next stage of the approach to selection of patients was slightly different in practice one from that utilised in practices two and three.

Sorted lists for practices two and three were given to the respective senior partners to eliminate any patient they did not wish to be contacted or whom they felt to be inappropriate to participate. Respective senior partners then took the list to a practice meeting to confirm, with remaining partners, there were no other patients to exclude. The final list was handed back to the researcher whom randomly selected patients for initial contact. To maintain anonymity no member of the practice staff knew which patients on the list were / were not contacted.

In practice one the Excel lists, as detailed above, were further sorted into "registered GP". These lists were then handed to the individual partner, rather than via the senior partner, to eliminate any patient they did not want contacted. Once completed each list was handed back to the researcher, the process of sending out letters and collecting back forms was then conducted as for practices two and three. Selected patients were sent letters requesting participation (see appendix 1.6), an

[3] A Read code is simply a medical classification coding system utilised in most GP practices

information sheet further outlining the study (see appendix 1.10) and a form to complete indicating their willingness, or not, to participate.

Poor response rates to "opt-in" studies, such as this, are well documented, with a typical response rate of approximately 38% only (Junghans et al., 2005). Consequently approximately three times as many requests for participation, as were actually required, needed to be sent out. As the study progressed it also became clear that response rates from patients in the younger age groups were significantly lower than those in the older age groups. It was therefore decided to send out additional letters to those in the younger age groups. Some willing participants in the older age groups were also declined. A total of 83 letters were sent to hypertensive patients and 53 letters to rheumatoid patients (see appendix 1.11).

Upon receipt of confirmation of a willingness to participate interviews were arranged, by the main researcher using contact details provided on the reply form, to take place at a location and time specified by the participant. Venues included: the patient's workplace, NHS sites or the patient's own home. All patients consented to participate, and have interviews recorded, using standard consent forms (see appendix 1.12 and 1.13). The same consent forms were also used for HCPs.

3.3.7 Analysis of data

The study used a modified grounded theory approach to analysis. The main principle of grounded theory i.e. allowing themes and ideas to emerge from the data was applied (Strauss and Corbin, 1998). These themes and ideas were then subjected to content analysis, whereby the frequency with which they emerged was considered (Silverman, 1993). Those occurring frequently were sorted, organised and indexed into a coding framework of headings (refer to appendix 1.14). These categories were further interrogated, through constant comparison, and grouped together to clarify the relationships between categories and to refine

emerging ideas. Coded text was constantly checked and rechecked to ensure relevance to new headings created. Sections of texts were highlighted then cut and paste into the framework. The HCP and patient transcripts were analysed alongside one another so that one single broad coding framework was developed and utilised throughout. Identified comments or statements included those that were critical of the identified theme as well as those that supported it. All data manipulation utilised the software package NUD*ST NVIVO version two. To facilitate this process of analysis all interviews had to be audio-taped and transcribed verbatim.

This section outlined the method utilised within the qualitative phase of the study. The following chapter discusses the results obtained and how these were used to inform and develop phase two of the study.

Chapter 4: Results and Discussion - Phase 1: Qualitative Phase

4.1 Introduction

In this chapter the results obtained within the first (qualitative) phase to this programme of work will be discussed. They will be discussed under the following headings:

- The participants
    - The practices
    - Health care professionals (HCPs)
    - Patients
- Health policy issues and the perspective of the professional
    - Choose and book (C&B)
    - Practice based commissioning (PBC)
    - Quality outcomes framework (QOF)
    - Non-medical prescribing (NMP)
    - Out of hours (OOH) and extended opening times
- Consultation issues
    - Nature of the consultation
    - The nature of nursing consultations
    - Consultation duration
    - Waiting times
    - Continuity of care
    - Practice size and mergers

For the sake of simplicity all quotes will use “he” whatever the gender of the interviewee.

4.2 The Participants

4.2.1 The Practices

As outlined in section 3.3.4.1 the practices were purposefully selected to represent as diverse a sample as possible. Each of the three practices had very different ways of working as well as significant differences in demographics of the population they served. Refer to section 3.3.4 for practice descriptives in terms of number of partners, list size and rural /

urban make-up. Further details of each practice, in terms of ways of working, are outlined below.

Practice one: This was the largest practice and they maintained individual lists. They had no set telephone triage system but did utilise telephone consultations when discussing results and / or follow-up consultations. Some of the partners, depending upon individual preferences, also used the telephone to triage patients following a request for an initial consultation. This was not, however, universal between all the partners. The practice was supportive of non-medical prescribing and had mentored three nurses through the programme (one from primary care and two from secondary care). They maintained some “on the day” appointments but had refused to go down this path altogether believing there were situations when patients needed to pre-book appointments.

Practice two: This practice maintained an open access system and did not maintain individual patient lists. Some pre-bookable appointments were available for follow-ups but the predominant ethos of this system was “on the day” open access. The practice did not triage patients or routinely use telephone consultations. Patients did not telephone the practice for an appointment (other than for the limited pre-bookable appointments). They arrived at the practice and added their name to a list, being seen, in turn, by the next available GP. If a patient did not wish to consult the next available GP they could wait further until a GP they were happy to see became available. If the surgery was busy it was the patient’s choice whether or not to wait. The patient estimated how long their wait might be and then decided if they felt their condition warranted that wait or whether they should return on a different day. The practice appeared quite supportive of non-medical prescribing but they did not actually employ any non-medical prescribers. One possible explanation was that the nurses they did employ had not voiced any strong views in favour of it and did not appear to wish to pursue it.

Practice three: This was the smallest practice and they relied heavily on GP triage. They did not feel this was a role that could be undertaken by other health care professionals (such as nurses). The practice had introduced 100% open access with no pre-bookable appointments but there had been complaints regarding this and they had, recently, reverted to having approximately 25% of GP appointments as pre-bookable. It was not clear that all patients were aware that pre-bookable appointments had been re-introduced and the apparent lack of these was the most common complaint amongst the patients, from this practice, interviewed. The GPs interviewed were not particularly supportive of non-medical prescribing; neither did they employ any non-medical prescribers. Two of their practice nurses had expressed an interest in the course but nothing had been pursued.

The practices also differed in their organisational approach to choosing a GP. All three practices, on registration, allocated the actual GP to the patient. However, as practices two and three did not maintain individual lists, the registered GP was not necessarily the GP the patient actually consulted. The decision as to which GP to consult, in practices two and three, was left to each patient depending upon their individual preferences. Some patients chose to see the same GP (albeit not their registered GP) for all consultations but some opted to see different GPs depending upon the presenting condition and their perception of the GP's individual areas of expertise. The organisational structure of practice one did not allow for this degree of flexibility. Almost exclusively the patients only consulted with their registered GP. The decision as to which GP this should be was taken by the practice depending upon the GP's list size at the time of registration and also whether or not there were other family members registered with a particular GP at the practice.

Invariably the GP appointments were ten minutes in length whereas nurse appointments tended to run to between ten and twenty minutes. Twenty minutes was allocated for chronic disease management (in particular respiratory disease and diabetes) and ten minutes for routine

clinic appointments (e.g. for family planning advice, immunisations and vaccinations and wound management). It was almost universally acknowledged that the allocation of time to a consultation was largely academic as clinics invariably ran over. This appeared to be accepted practice.

In contrast to the GP appointments, nurse appointments were exclusively pre-bookable. This was the area where demand for appointments was struggling against capacity in all the practices interviewed. It was also apparent that the QOF had dramatically increased demand for nurse appointments. In return this appeared to have resulted in a workload shift towards Health Care Assistants and Phlebotomists.

4.2.2 Health Care Professionals

All the HCPs approached to participate in this phase of the study agreed to be interviewed. A total of 17 health care professionals (seven GPs, four practice managers, two pharmacists and four nurses) were interviewed with each interview lasting approximately 45 minutes to one hour. The age range was 30 years to 53 years (average 44.8 years). Ten HCPs worked full-time and seven part-time (range 12 hours to 27 hours, average 19.6 hours). All of the nurses were female and all worked part-time. The pharmacists were both female, one was full-time and one part-time. For other HCPs there was a split between male and female as well as full-time and part-time work patterns. A breakdown of interviewees by age, gender, work pattern and professional group is detailed in table four overleaf.

Table 4: Demographic details of health care professionals interviewed

ID no.	Practice	Gender	Age	Occupation	Work pattern (hours)
1*		M	45	Practice manager	Full-time
2	3	F	40	Nurse	Part-time (13)
3*		M	51	Practice manager	Full-time
4*		F	43	Practice manager	Part-time (27)
5	3	F	38	Nurse	Part-time (18)
6	1	F	49	Nurse	Part-time (25)
7	3	F	41	Nurse	Part-time (12)
8	3	M	53	GP	Full-time
9*		F	30	Pharmacist	Full-time
10*		F	48	Practice manager	Full-time
11*		F	52	Pharmacist	Part-time (24)
12	3	F	48	GP	Part-time (18)
13	1	M	46	GP	Full-time
14	1	M	46	GP	Full-time
15	2	M	42	GP	Full-time
16	2	M	53	GP	Full-time
17*		F	37	GP	Full-time

*Not affiliated with any particular practice (refer to section 3.3.6.1)

4.2.3 Patients

A total of 139 patient letters requesting interviews were sent out during the first half of 2006 (January to June). There were 22 (15.8%) responses agreeing to interview, nineteen patients declined (13.7%) and 98 (70.5%) did not respond. Interviews were subsequently arranged with patients to give as broad a representation of views (considering gender, age band, employment status and medical condition) as possible. The breakdown of letters sent and responses received is detailed in table five below.

Table 5: Details of patient letters sent, requesting interview, and responses received

	No. of letters sent	**Positive responses**	**Negative responses**	**No response**	**Interviews**	**Reserve**
HTN	86	17	7	62	14	3
RA	53	5	12	36	5	0
Total	139	22	19	98	19	3

Due to the prevalence of the condition there were fewer rheumatoid arthritis patients (RA) than hypertensives (HTN). Nineteen patients were interviewed, nine men and ten women. Three patients were not interviewed because patients with similar age, gender and condition profiles had already been interviewed and it was considered the views of those from this particular demographic had been obtained.

Four patients were aged under 40 years (one male and three female); seven patients were aged 40 to 60 years (four male and three female); and, eight patients were aged 60 years or older (four males and four females). Six of the women and eight of the men had a diagnosis of high blood pressure. A total of five patients had a diagnosis of rheumatoid arthritis (four women and one man). Details of the patients interviewed are reported in table six below. Full details of each practice register plus

the number of patients approached for interview, detailed by practice, are detailed in appendix 1.11.

Table 6: Breakdown by practice, age, gender, medical condition and employment status of the patients interviewed.

ID no.	Practice	Gender	Age band	Medical condition	Employment status (hours)
1	2	M	>60	BP	Retired
2	3	F	>60	BP	Retired
3	3	F	40 - 60	BP	Part-time (15)
4	3	M	>60	BP	Retired
5	3	F	40 - 60	RA	Unemployed
6	3	M	>60	BP	Retired
7	3	F	>60	RA	Retired
8	3	F	>60	RA	Retired
9	3	F	>60	BP	Part-time (12)
10	3	M	40 – 60	BP	Full-time (self employed)
11	1	F	40 – 60	BP	Full-time
12	1	M	>60	RA	Retired
13	1	F	<40	BP	Full-time
14	1	M	40 – 60	BP	Full-time (self employed)
15	1	F	<40	BP	Unemployed
16	1	M	40 – 60	BP	Full-time (self employed)
17	2	F	<40	RA	Part-time (12)
18	2	M	<40	BP	Full-time
19	2	M	40 - 60	BP	Full-time

4.3 Health Policy Issues - Professional Perspective

At the time of the study there had been many significant changes to the way NHS services were delivered. The key policy developments were discussed in the literature review (chapter two). The extent to which each of these areas had been accepted varied quite markedly. An overview of the professionals' views on these policy developments will be summarised here. Where appropriate the occasional patient quote will also be used however on the policy issues these were relatively few.

From the professional perspective, local GPs and practice managers felt that choose and book (C&B) was not worth implementing as it offered patients relatively little choice over what was previously available. The nurses and pharmacists interviewed knew relatively little about it. Similarly the nurses and pharmacists appeared to have a limited knowledge of, and views on, payment by results (PbR), practice based commissioning (PBC) and out of hours care (OOH). On the other hand the GPs and practice managers interviewed considered that PbR was good in theory but the use of a national tariff (i.e. the same price every where the treatment is offered) was not considered appropriate. It was felt that treatments in, for example, London or Bristol would be more expensive than the same treatments locally, thus there should be a higher tariff set in such areas – similar to the cost of living weighting applied to some salaries in areas such as London. With respect to PBC there was a range of opinion with some concerned that the finance would not follow (flow down) to the level of the practice. It was considered a relief, by GPs, that OOHs was now the responsibility of the PCTs. They also felt that they had benefited financially from this decision.

The new contract for GPs (nGMS) was generally well accepted by all four groups of professionals interviewed – although it was invariably referred to in terms of just the clinical domains contained within the "Quality Outcomes Framework" (QOF). In reality this was just part of the new contract. All four groups of professionals also expressed firm, albeit

varied, responses to non-medical prescribing (NMP). Some positively supported NMP, some were cautiously supportive and still others were against it. Views were mixed across all the professional groups interviewed. The extent of HCP knowledge was skewed to the population selected – most notably the pharmacists interviewed were practice-based pharmacists with minimal community pharmacy experience or involvement. They had had a relatively large exposure to nGMS (particularly the clinical domains of the QOF).

Views expressed regarding the areas outlined above (C&B, PBC, nGMS, NMP and OOH) will be discussed more fully within the following subsections. The new contract for GPs (nGMS) will be discussed in terms of the QOF only. Interest and knowledge with respect to PbR was limited and will therefore not be discussed further. Knowledge of any of these policy areas was minimal for all the patients interviewed, thus although some relevant patient views will be included this section will largely be confined to the perspective of the HCPs. Patient views were more prominent when discussing the "non-policy" areas (such as quality and service organisation / structure). Patient views will be discussed more widely in section 4.4.

4.3.1 Choose and Book (C&B)

Choose and Book was considered by nearly all of the respondents to be slow and cumbersome in terms of both the actual time taken to complete the process and the quality of the information technology (IT) systems (which, it was claimed, slowed the entire practice computer system down). It was not considered to offer patients any advantage. Indeed it may have offered disadvantages over the previous system that involved the GP suggesting, or recommending, a particular consultant or hospital based upon their knowledge of both the patient and the consultant / hospital:

> "*I have been working with C&B since the beginning of the year and at no time has a patient said to me that I am going to go and look*

at these five hospitals you have given me and decide which one I am going to choose. The decision has been basically made by me at consultation which is pretty much what used to happen before…….90% of the procedures they will have done locally, as close enough to their doorstep as possible."

HCP 14 (GP)

"*I have tried using it a couple of times. It takes so long to actually do the mechanics of it……. If you are a sensitive old lady, she might not want to go to a surgeon who is in and out the door. She might want someone who can hold her hand and I would know that at my computer which consultant it is, so I think patients are getting less choice now with choose and book"*

HCP 13 (GP)

This latter quote is an interesting statement as it illustrates what the GP thinks the patient's needs are based upon their knowledge of both the patient and local consultants / hospitals. This may, or may not, be what the patient wants. Indeed comments from patients suggest that they are just as concerned with practical issues such as distance from relatives (and hence accessibility), physical size of the hospital and ease of parking in addition to considering what they perceived to be the degree of specialism on offer:

"*(I was) prepared to travel further because (I) felt it was a more specialist service and I would get better care*…."

Pt 9

Perhaps part of the reason for disliking C&B was a concern that, as the IT developed and patients became more familiar with the system, it may lead to GPs having to relinquish control. Whilst patients may ask for GP's advice, that advice may become one factor amongst many that the patient would consider.

> "*It is great that they (patients) should have choice, but the first question I ask them is where would you like to go, X, Y or Z? And they go "oh well I would like to go to Y because my husband works in Y", so I say "fine lets go to Y"; or "what do you think doctor?" And I will say well the best bloke is in X, so we have had that conversation for the last twenty years, so I don't see why we need choose and book*."
>
> HCP 8 (GP)

One of the problems with the previous system was that it was not clear that GPs, when making recommendations, were actually basing their advice on what the patient considered to be important. A patient's criteria for judging a consultant to be the "best bloke" may be very different from the GP's criteria. At first glance the above quote implies that the GP considered patient choice to be a good idea and he appeared to be in favour of it. However, nothing stated demonstrated active support for patient choice by providing details on the pros and cons for each option – although he does say they would have had a conversation, which implies some negotiation.

Few patients were aware of what C&B was beyond choice of hospital. One patient was aware and their comments implied that they were in favour of having the choice. The implication was that they would use it to inform a clinical choice regarding their treatment:

> "*I don't have anything that I am concerned about, but I suppose if I did suddenly have something that needed treatment then I would probably take more notice of league tables*".
>
> Pt 11

4.3.2 Practice Based Commissioning (PBC)

Many of the quotes that demonstrated support for PBC involved GPs having increased control over resources. The disadvantage mentioned was invariably the problem of adequate funding. This could be indicative

of the quandary modern GP practices find themselves in, with opposing tensions between clinical care and cost. There appeared to be a tension between running the practice as a business, within a limited financial resource, and the clinical aspects of providing patient care. They wanted control of both clinical decisions and cost elements but not if it involved rationing patient care.

Most GPs, although not all, were in favour of PBC as it put them in control of the decisions regarding what clinical services should be developed and how resources should be allocated. They were also in favour of running practices, and health care services, as a business and were keen to provide a more efficient delivery of services. They were not, however, keen on having to make rationing decisions if the financial resource was not available. This was viewed as potentially damaging, professionally, by adversely affecting the doctor-patient relationship. Almost unanimously the GPs felt PBC was inadequately funded:

> "*I think PBC is fantastic but I think to do PBC properly, you need start up funding. You need to invest to save money, you need start up funding to get services off the ground*"
>
> HCP 16 (GP)

> "*Practice Based Commissioning is probably a good thing. I think the way in which it is being conducted is poor. It has lacked direction, it has lacked leadership. PBC basically shouldn't be PBC, it should simply be commissioning and taking views and feedback of the localities you are commissioning for really. I don't think we (GPs) should be getting involved in the actual commissioning of care as such, that should be done for us in my opinion*"
>
> HCP 14 (GP)

As can be seen there was support for GPs to make decisions on what services should be funded and developed but concern that there would be inadequate resource to undertake this effectively.

4.3.3 Quality Outcomes Framework (QOF)

All the HCPs considered QOF to be good medicine. The majority felt that they were already "*doing everything*" within it but that it had helped to formalise what was being done. The QOF had provided the necessary structure to enable practices to demonstrate that what they knew to be happening was actually happening. In turn this had enabled them to earn QOF points that ultimately translated into a financial benefit.

There was widespread recognition that QOF, whilst providing clarity, structure and a sense of achievement in the provision of quality patient care, also encouraged the development of a "tick box" culture to consultations. Overall there was an equal split, across all the HCPs interviewed, as to whether this was good or bad. Approximately half of all the HCPs felt that this was not necessarily a problem. There was no differentiation between the HCPs but a mix across all professions:

> "A *lot of the consultation may be involved in collecting QOF data and if you extrapolate the evidence, or you accept the extrapolation of the evidence that QOF is evidence based, then collection of data and making sure that blood pressures are controlled then you are working towards better patient care and better outcomes in the long term...I love it…I have a clear evidence based framework that I can work to, all of my colleagues can work to. We are all working towards the same end, we can treat patients according to protocol. It is absolutely unambiguous*"
>
> HCP 15 (GP)

> "*I think the new contract is an excellent concept. I like having national targets to gold standards, if I hit them I feel like I am doing the best possible work that I can with my patients…Personally I*

would rather have the tick box culture than people coming in and being a bit airy fairy."

HCP 16 (GP)

"*It (the QOF) provides a framework. It's a reminder of what's required. I think if the QOF was asking us to do things which were irrelevant or a waste of time then yes there would be bad press about it but actually everything that's required for QOF I feel is good medicine and I feel we should be doing it*."

HCP 5 (NURSE)

"*I think a lot of the things we were doing before the contract, but now we have to tick all the right boxes and prove that we are doing that and recording it……. it just formalises everything. I think it has been good and it does ensure that we are now sending out letters to our patients for their blood tests etc. on a very regular basis rather than on an ad-hoc basis…….. we pick up on patients who are not coming to their reviews, who are not coming to be seen. How much that happened before I can't say but I am sure there were some patients that slipped through the net*"

HCP 10 (PRACTICE MANAGER)

However, not all HCPs were convinced that the ticking of boxes would necessarily equate to improved patient health outcomes:

"*The points that we have got I would have hoped we would've achieved without the contract. It's a bit of a tick box. It's made us focus on checking we're sure these things have been done, whether it's actually going to improve patient health I don't know*."

HCP 12 (GP)

"*A bit like QOF figures, does the fact that you get maximum prize in QOF mean that you are a very good practice? Yes you are an organised practice, it means you're aggressive going after the*

points. Does it mean you are deeply caring doing a fabulous job? I don't think so."

HCP 8 (GP)

"*It's (the QOF) quite disease focused and I think sometimes perhaps it makes us do things for ticking boxes sake rather than doing them because they actually need doing…there is nothing that satisfies me about ticking boxes. It's slightly taking away your clinical judgement a little bit, but it also focuses you on other things that you might have missed. So it's swings and roundabouts*."

HCP 7 (NURSE)

An interesting comment (see below) reinforcing the idea that QOF focused on processes rather than outcomes came from one of the practice managers. He had recently been to see his own (out of county) GP for a relatively minor acute condition but came away with the feeling that the GP had "ticked the box" without adding anything to his care:

"*He (the GP) took my blood pressure with the cuff around my elbow joint with my fleece rolled up over it. Even as a layman, I know you don't take blood pressure like that... and I really came away with the impression he was simply ticking the box*."

HCP 1 (PRACTICE MANAGER)

The practice managers all felt that although the QOF provided structure, it had also dramatically increased the amount of administrative work. Whilst it was acknowledged that anything involved in hitting targets, and receiving an incentive for achieving those targets, would require a degree of monitoring in ensuring transparency, it was felt, beyond this, there was a further increase in administrative workload by virtue of the requirement to invite patients to clinics and follow up on non-attendees. In some practices the increased administrative work was borne almost solely by the practice manager and their administrative support staff. In others the nurses were responsible for calling patients in for review. Some nurses

were not happy about the increase to their administrative workload – feeling it was not a good use of their time – whilst others seemed to feel they needed to be in charge of this as it gave them control over "their" patients:

> *"(One inefficiency) is like permanently looking through a list of patients to see who has been reviewed and who hasn't been reviewed….the administration in the front office now do it. I was every month looking through the list of hypertensives to see who should and who shouldn't be invited …….it was taking me for ever*"
>
> HCP 6 (NURSE)

> "*Every month I have to chase up the child immunisation targets, to 'phone up the mothers who haven't brought their children in…..it is quite time consuming and could be done by anyone. If we have got 89% I have to 'phone everyone but if I have got 91% I don't. In terms of children vaccinated it is only one so it's not really a help*"
>
> HCP 7 (NURSE)

> "*Because it is good medicine and it is relevant to my patient care I don't want to give it to anybody else….because I like to feel that I have control as to what my patients are doing, which is another reason I wouldn't want other nurses coming in (to run evening or Saturday morning clinics)."*
>
> HCP 5 (NURSE)

HCPs six and seven appeared to be more concerned with the bureaucracy of a target driven system whereas HCP five appeared quite territorial regarding "his" patients and liked to have complete control over who was being called in and when.

Even though there was broad agreement that the QOF was beneficial, there was also some debate regarding whether or not all of the areas represented were the most appropriate and whether or not the "points"

(and hence financial) distribution was appropriate. There was suspicion as to who devised the targets and what their motives for doing so were. A number of HCPs felt that certain areas of QOF were not necessarily relevant, whilst other areas had too many or too few points attached for the work that was involved in collecting that data:

> "T*here are areas where there are no points attached or the points are very low and they just don't get the recognition for the amount of work that is put in and others where there are too many points….. I will say the patient survey, although it is useful to survey your patients, the amount of money attached to it is completely disproportionate. This year I think we will get 70 points and we're due to get £200 a point so that's £14,000 for doing a patient survey of 250 patients and repeating it every year, I can't see the value in that at all."*
>
> HCP 4 (PRACTICE MANAGER)

> "*I'm not convinced about the medication reviews as they are at the moment, I think in the practice it is terribly easy……. just press the button for medication reviews. I am not saying that is what is happening but I suspect it is, maybe we need to target patients more who need reviews*."
>
> HCP 11 (PHARMACIST)

> "*Some of the QOF targets are rather controversial in their up-to-datedness, for example the obesity and the BMI index. I don't always feel they are providing improved care for the patient necessarily*."
>
> HCP 9 (PHARMACIST)

> "*You have a whole lot of domains which I think will be questionable: Chronic kidney disease[4] for instance, so much effort was put into it but there are other things that I think are more important……You wonder whether there are powerful lobby groups out there trying to get their domain in. You also start wondering if the Government is getting upset that we got so many points last year so they put some domains in that are almost impossible to hit, so none of us will get full points*."
>
> HCP 16 (GP)

When there was a distinct, measurable clinical target, supported by a high quality evidence base, the idea of "ticking boxes" was considered appropriate. However there was also a concern that in adopting a "tick box" approach to medicine some of the art of general practice was being lost. Whilst demonstrable, clinically targeted, patient care may have improved, some of the more supportive aspects of individualised patient-centred care also provided by general practice may have been lost. In this sense the nGMS actually appeared to be working against the Government ideals of providing patient centred care. The QOF may have made the approach to medical care more quantified but it may also have missed what was really important to patients:

> "*People in duress look for external sources for advice and support and GPs are the only ones that are left…….the difficulty we have got is the NHS is almost like a state religion…..but GPs are not the friendly local vicar alternative anymore. They are a focussed professional who are going to manage your medical condition*".
>
> HCP 16 (GP)

The one area of the new contract, outside of QOF, that was discussed was the abolishment of Saturday morning surgeries and GP responsibility

[4] At the time of this interview there was an on-going debate regarding what would / not be included within the 06 / 07 clinical domains. They were subsequently included.

for out of hours (OOH) care. The GPs felt this was one of the key areas where the Government had got negotiations wrong – although not from the GP's perspective, as it had benefited them personally:

> "*I do think the Government have totally bundled the new GP contracts. They should never have let Saturday mornings and out of hours disappear out of GPs control. I think they have really messed up with that, fantastic for the GP, we have done well*"
>
> HCP 14 (GP)

This issue will be examined further in section 4.3.5.

4.3.4 Non Medical Prescribing

Phase one of this work programme coincided with the DH announcement, in November 2005, that nurse and pharmacist independent prescribers would be able to prescribe any licensed drug except controlled drugs. This was considered the most radical of all the options presented in the consultation document (see section 2.3.2) and consequently also elicited some strong views from study respondents.

Despite the concerns expressed, nationally, regarding the safety of nurse and pharmacist prescribing (refer to chapter two), the study respondents widely acknowledged the practice of GPs signing prescriptions after the assessment had been undertaken by a non-medical colleague. Prescribing "*by proxy*" is also referred to in the medical literature (Bradley et al., 2005).

> "*So if a nurse suggests a drug for a particular disease like an inhaler we will tend to go along with that suggestion. They are not allowed to prescribe but we will endorse the suggestion and issue the prescription without seeing the patient. That is common practice now.*"
>
> HCP 15 (GP)

> "*We can prescribe and take the prescription through to the doctors who will then check that they are happy with that and then will sign it…….I check their lipids and if they haven't had their statins changed then I go to the GP and say look his lipids is 5.3 whatever and his statins need increasing and I just have to go through to the doctor and say is that ok and he says yes so he hasn't bothered to have a look at it*"
>
> HCP 5 (NURSE)

Such practices question what prescribing actually constitutes (Weiss & Sutton, 2009): the technical aspect of prescription signing (which is really what the DH announcement addressed as it allowed for amendment of article 12 of the Prescription Only Medicines Act) or the wider process of assessing the patient, reaching a decision on the way forward, selecting what to prescribe (based on the evidence and the history taken) and then generating the prescription. As the process of signing a prescription, without seeing the patient, was widely accepted as common practice, and any change could be viewed as no more than a bureaucratic necessity, the outcry within the medical press appeared slightly excessive (Connelly, 2005). However, uptake of non-medical prescribing has been slower than expected and, of those who had qualified, not all are actively prescribing (Wang, 2006).

Of the four nurses interviewed only one had completed the independent prescribing course. This nurse felt it had "liberated" her life:

> "*I can print it, sign it and it is done. It saves my time and it saves the patient's time*"
>
> HCP 6 (NURSE)

Reasons put forward by the other nurses for not undertaking the course concerned the time involved to complete the course: the cost in time to them personally. The course was seen as being a significant "chunk" of

time investment in training for relatively little gain. The nurses did not perceive that the final outcome was worth the investment and energy:

> "*My life is too busy. I don't have the time to do an eight month course*"
>
> HCP 5 (NURSE)

> "*Yes the hoops you have to go through and the amount of training to prescribe a relatively safe drug. I don't really feel motivated to do that and GPs are so fantastic at signing almost any prescription or any prescription that you give them… I don't feel I want to go on such a lengthy course to be able to do that when I can just print it off and they will just sign it."*
>
> HCP 7 (NURSE)

Whilst insufficient time was possibly a convenient excuse, differences in how each practice operated may also have influence on how the different nurses perceived a good use of their time. The nurses in practice one had to wait outside a consultation room until the GP became free to sign the prescription. Contrastingly, the nurses in practice three could interrupt the GP during the consultation if they felt they needed to. The time taken for the practice three nurses to ensure a prescription was signed was consequently less. Additionally, the perception of time involved in the process of getting a prescription signed versus completing a prescribing course was very different. There was a small, but incremental, investment of time in getting a signature whereas completion of a prescribing course would require significant investment - albeit over a shorter period. The above quote (from HCP 5) also demonstrated another aspect. The investment of time in getting a prescription signed was not considered a personal investment. Completion of the course did appear to be considered so and was therefore likely to impinge on personal time and hence personal life.

The GPs in practices two and three seemed indifferent as to whether or not their nurses trained as non-medical prescribers. Presumably, they did not consider the relatively short, albeit incremental, amount of time wasted in having nurses waiting to get prescriptions signed to be significant. This was surprising given the introduction of the QOF and the consequent shift towards more nurse-led chronic disease management, resulting more then ever in increased pressure on nurse time.

As demonstrated by the previous quotes (from HCP 15 (GP) and HCP 5 (nurse) on pages 114 and 115) the GPs did not appear unduly concerned with accepting the legal responsibility for signing a prescription when they had not personally assessed the patient. It appeared to be relatively common practice. One of the arguments expressed against the DH announcement was that GPs were accountable for the prescribing mistakes they made and there was some doubt as to whether or not "new prescribers" were willing to take the same responsibilities (Walbeehm, 2005). Yet these interviews suggested GPs were willing to accept accountability for prescriptions not generated by them for patients they had not assessed.

As GPs were signing prescriptions (generated by nurses and pharmacists) for patients they had not assessed, the basis of the concerns declaring NMP would result in a decline in patient care and safety, appeared to be unfounded. The nurses and pharmacists were, to all intents and purposes, already prescribing. What they were not doing was accepting legal responsibility for the prescription they had generated. It was possible that something other than patient care and safety was therefore causing concern. If the process of generating a prescription was as widespread as implied then it may be the change in who was signing the prescription that was at the heart of the problem. The act of signing the prescription, and thereby accepting legal responsibility for that prescription, retained the traditional format of "doctor in charge". Whilst practices appeared to be very open-minded and forward thinking in allowing their nurses (and sometimes pharmacists) to generate

prescriptions and interrupt GPs during a consultation, it was the GP that retained the authority to sign the prescription. It appeared some GPs preferred their practices to operate at less than maximum efficiency because it gave the illusion of a team approach to primary health care (and was thus in line with new ways of working, appearing to promote the extended role of the nurse or pharmacist) whilst still retaining a distinct hierarchical approach.

Although there were no direct questions to elicit the views of patients on whether or not they minded being interrupted during a consultation, one patient did volunteer their view and did not like being disturbed:

> "*It's breaking someone's train of thought. When you are discussing something about your health or something that is important to you, you don't want someone coming in and say can we do so and so*"
>
> Pt 6

It was difficult to draw out the views of patients on non-medical prescribing. It was still a relatively new concept plus one that was not particularly well supported locally. Very few of the patients had experience of, and hence strong views on, it. As with the apparent discrepancy in views of health care professionals on what actually constituted prescribing, patients tended to confuse prescribing and dispensing when they discussed the role of the pharmacist. They assumed that pharmacists had always prescribed, when it appeared they meant dispensed. One patient also confused non-medical prescribing with a "Medicines Use Review (MUR)" that he had recently received from the local community pharmacist (under the new contract for community pharmacists).

It was perhaps not surprising that patients were confused about prescribing. Some of the GPs were also confused about pharmacist prescribing. Despite the fact that all the practices involved in the study received pharmacist prescribing support (and had received this for

several years) when the subject of pharmacist prescribing was raised the GPs only referred to community pharmacists being able to prescribe. One of the practices had received prescribing support from a pharmacist who was qualified as a supplementary pharmacist prescriber (albeit she actually practised as a prescriber with a different practice) yet this model of a PCT or practice support pharmacist prescriber was never recognised:

> "With *pharmacist prescribing I am concerned because we are not necessarily aware then if the pharmacist is prescribing…….None of us feel threatened by nurse prescribing, it is complementary and helpful and because she is in the practice it is all on computer so we have all got access that information so nothing is happening outside which is a surprise*"
>
> HCP 13 (GP)

> "*I think as long as you have a well trained individual I have got no feeling of protection to be honest, my concern would be more the commercial basis of decisions made by pharmacists*"
>
> HCP 16 (GP)

Practices did not appear to be making good use of non-medical prescribing. All three practices, in this study, had reviewed how their appointment systems were set up to help them achieve the access targets of the QOF. All had also considered how services could be re-arranged to help release GP time (for example by the use of telephone triage). Yet only one had considered utilising a non medical prescriber (NMP). Additionally this NMP, at the time, was only utilising her skills within contraception clinics – despite having diplomas in a number of clinical areas. It could be hypothesised that better use of nurse time, using their skills more appropriately, might save GP time and hence enable a practice to reconfigure services to better suit patient need.

4.3.5 Out of Hours and extending opening times

With the introduction of the nGMS, “Out of Hours” (OOH) care became the responsibility of the PCT rather than GPs and / or GP co-operatives. It could be hypothesised, given the relatively strong opinions regarding the importance of continuity of care (to be presented in section 4.4.5), that GPs would prefer to maintain some form of control during the “out of hours” situation. This did not appear to be the case. The majority were relieved that they were no longer obliged to provide cover during evenings and at weekends. The recurrent theme was that if they were to be requested to provide OOH cover again it would need to be appropriately funded. There were also several analogies comparing the ability of a customer / patient to see a dentist, bank manager or a solicitor outside of normal office hours and likening this to the GP scenario:

> “*To open that late, as partners, we would extend our day from a 12 hour day to 16 hour day. I can only do a certain number of hours, so I think the thing is, obviously GPs have got their own personal lives as well and by providing more it means having less for your family, I am not willing to do that….. if I am not resourced for that I am not doing it*”
>
> HCP 16 (GP)

When asked about providing OOH care in terms of chronic disease management, for patients who were unable to attend clinics during normal surgery hours, there was an assumption (by all HCPs) that such clinics would need to have a GP present. Conversely, most practices ran nurse led chronic disease management (CDM) clinics during the week. The arguments largely considered the balance between the cost of providing such clinics for patients unable to attend during normal surgery opening and the actual need for it in terms of patient convenience:

"*In the ideal world that would be wonderful, but that time would have to come from somewhere else……and a lot of the chronic disease management is in the elderly or retired people*"

HCP 13 (GP)

Opinions between nurses appeared to be divided on this topic. Like doctors the nurses were concerned that any service should be adequately funded, they too were concerned regarding the impact on their personal and family lives. The nurses however were all willing to support the re-introduction of such a service if it could be undertaken on a rota / bank style arrangement whereby they would only be required to work occasional weekends and / or evenings. The nurses were concerned about the apparent lack of continuity of care for chronic disease management (CDM) patients:

"*I used to be a midwife and I've done many years of shift work. I've done many years of working Christmas Day, New Years Eve, night duty and the joy of this job, and I think a lot of practice nurses feel the same, is that it allows you to be a professional, it allows you to have a career as well as being a mom and having a home life. I would consider doing Saturdays on a bank rota, I would work say a one in four but I most certainly do feel that practice nurses aren't paid enough to do it*……"

HCP 5 (NURSE)

"*I think you are going to be lacking in continuity. I think what would be better was if surgeries - which is not going to happen because they have taken it away - is for surgeries to be open on Saturday morning but properly open. Not how it used to be where they were only open for emergencies but to be open properly, offer the whole range of services on a Saturday*"

HCP 6 (NURSE)

> "*I think it would be nice to offer some form of health care out of hours and personally I would be quite happy to work evenings and weekends. I think Friday to Monday is quite a long time for Joe public to go without any access to any routine health care*….."
>
> HCP 7 (NURSE)

One comment that appeared to be particularly pertinent, in that it demonstrated the problems of unlimited demand, was:

> "*We found historically that however much we increase our hours we still have a greater demand than our patient time allows. It almost doesn't work by increasing the hours because they just get filled up and you can't see patients all hours of the day*……"
>
> HCP 5 (NURSE)

This comment was reflected in many aspects of how the NHS operated – it applied to secondary care as well as primary care. It appeared, from my personal experience of working as a pharmacist for 25 years, that it did not matter how much time was saved by re-engineering services there were still other patients needing to be seen that would occupy the time, or perhaps bed, released.

The patient perspectives on hours of service were diverse. Some patients, whom were in full-time employment, felt that their diary would have to be managed to allow for appointments during surgery time – but their health was more important:

> "*If I need a check-up by my doctor, for whatever reason, then if he says he can't see you from Monday to Friday in the evening, only from 9am-6pm, then I will make sure I am there. My health is more important*."
>
> Pt 10

Others, including those that were retired, felt that appointment times were not always convenient. This was particularly evident in the more rural practice (practice three) but it was not clear whether this was linked to rurality / transport issues or the actual hours of service of this practice. The patients that did feel this were always careful how they worded any response. They were not keen to appear to be critical of any component of their care. This was a common theme throughout the interviews. Patients were eager to tell "horror" stories regarding the care of their friends, or relatives, that were not registered with "my practice" but they were loathe to appear too critical of their own practice. This theme will be discussed further under "continuity of care and relationships" (section 4.4.5):

> "*I know this practice is open in the afternoon but I don't think it is past teatime. The last appointment is probably at 5pm so I suppose for people who do work it would be beneficial if they could come after work. I think we all realise it has cut down because of the doctors only wanting to work certain hours. Years ago they used to do more home visits and work day and night. Well doctors aren't going to now, they want more regular hours it seems…. the old system was probably better*"
>
> Pt 3

> "*There does seem to be a great deal of concern, and I think a genuine concern, relating to the fact that there is no professional person to contact at weekends when the doctors surgery is closed*……"
>
> Pt 6

Finally, some appeared to be resigned to having things as they are even if they were not happy with it:

> "*What else can you do*?"
>
> Pt 9

4.4 Consultations

This section will discuss issues more pertinent to the patient perspective: issues at the "micro" (e.g. the consultation) level. Although these issues are "micro" they still draw on policies, emphasising patient centredness and shared decision making. These will be discussed from both the perspective of the patient and the HCPs. In particular, the issues around how consultations are organised and operate in practice, such as consultation style (including patient centred care and shared decision making), waiting times, continuity of care, consultation duration and practice mergers). Patients, locally, had had little exposure to the Expert Patient Programme (EPP) thus this will not be discussed further.

4.4.1 Nature of the consultation

Responses to open questions regarding consultation styles indicated that GPs unanimously considered their own style to be patient centred. Not only was this in the best interest of the patient but it also gave them job satisfaction:

> "*I like patients to understand where possible what the treatment options are: to discuss the treatment options with the patient so that they are happy with whatever is decided upon*"
>
> HCP 12 (GP)

> "*When I started in general practice I followed a lot of the college guidelines regarding how to do a consultation, following this mode of consultation or behaviour classifications and I found it just ran me round in circles…I have more and more tried to deal with the person in front of me and given them the appropriate amount of time that allows me to take the history, do the examination and decide on the investigations appropriately*"
>
> HCP 16 (GP)

"*You need to be honest with the patient. Present them with all the facts as best you can in layman's terms for them be able to understand and to be sure that the patients are fully aware so they make an informed decision.*"

HCP 9 (PHARMACIST)

The above indicated that HCPs believed a partnership with the patient, giving patients the necessary information and focusing on their needs, was important. For the relationship to be successful and the treatment to be adhered to there must be an agreement on the chosen course of action. In contrast, involving patients in the decision making process was not always the approach adopted by all GPs in the past (see quote below from HCP 8). Historically there were clearer demarcation lines between the GP as the decision maker and the patient as the passive recipient:

"*I think twenty years ago it was very much the doctor / patient like that. Now it has become much more a two way process and that the patient can try and get involved in their own path.*"

HCP 8 (GP)

Patient centred care was now high on the political health care agenda and the health care professionals not directly providing clinical care, such as practice managers, were also discussing it:

"*They (the GPs) have a very holistic approach to appointment lists in that they like to have the whole family registered with one particular doctor so they get the whole holistic approach of understanding the family background, what's going on*"

HCP 10 (PRACTICE MANAGER)

"*I think the nature of this practice is to be very much patient focused and accommodate their needs wherever possible. It will become far more patient centred...whether you like it or not*."

HCP 1 (PRACTICE MANAGER)

There were several comments from patients indicating that consultations were more patient focused now than 20 or 30 years ago. However, there were also comments suggesting that consultations were still not as patient orientated as either the patients would like, or the GP felt they were:

> "*Very often you are telling them what is wrong with you and they are writing, which I can see covers things but you are never too sure if they are taking it all in if you know what I mean*"
>
> Pt 3

> "*Yes she gives you time, she listens. That's the main thing, they need to listen and not start prescribing you something when you're half way through the door"*
>
> Pt 2

Whilst there was debate regarding just how patient centred consultations were, all agreed that consultations were more patient centred today than a decade or more previously - the patients' views on their treatment options were now sometimes sought and considered. However it would also appear that the QOF may have introduced a "tick box" culture in the consultation and HCPs may be as concerned with this as they are with the patient's agenda (see section 4.3.3).

4.4.2 The nature of nursing consultations

In primary care the majority of routine chronic disease management (CDM) was undertaken by practice nurses and, in a handful of cases, by non-medical prescribing pharmacists. There was evidence to suggest that GPs may be becoming deskilled in CDM as they now undertook relatively little of this work. Unfortunately this introduces limitations in itself - many of the nurses specialised in just one therapeutic area making it difficult to consider the patient in a holistic manner.

The therapeutic areas invariably discussed by all the HCPs in this study were those that lent themselves well to the “tick box” culture and the use of templates. Activities that had specific and measurable disease process indicators attached to them, often those contained as targets within the QOF. These included cholesterol and blood pressure targets for those with ischaemic heart disease (IHD) or hypertension, peak flow readings for the asthmatics and chronic obstructive pulmonary disease (COPD) patients and HbA1c readings for diabetics. None of the HCPs mentioned nurse led consultations for the clinical areas that did not have specific and measurable indicators, areas such as mental health, sexual health or falls.

Beyond CDM clinics the role of the practice nurse was frequently discussed, by both HCPs and patients, in terms of practical, or task based, activities e.g. ear syringing, weight and height checks, vaccinations and ECGs. This is in line with other studies (Charles-Jones, 2003). Even patients that attended annual nurse-led CDM clinics still interpreted the nurse role in very “hands-on” terms. The activities discussed were often template or protocol driven and, although important to the overall well being and health of the patient, they were not always relevant to the patient’s presenting complaint. Those activities not related to the presenting complaint invariably contributed to a QOF target however (and hence practice income).

> “*Nurses are extremely good at following protocols and that’s why the chronic disease things have worked so well. Doctors by and large are not good at following protocols. They all do something slightly different, they have different antennae, they have different experiences and they don’t work by and large with protocols*”
>
> HCP 8 (GP)

> “*The patient spends 20 minutes with a nurse measuring their height, weight, blood pressure, their peak flow and all the rest of it,*

whether it is relevant to the condition they have turned up with or not"

HCP 15 (GP)

"*I think the nurses at the surgery where I go are more there to take stitches out and give injections*…."

Pt 17

"*Nurses would be for specific things like…I went there when I started having injections so that she could tell me what to do and things like that…a boil or…I've got some corns growing on my feet. They could deal with that.*"

Pt 1

"*You go and see the nurse for something you want doing. High blood pressure test…they are taking bloods and sending them off*."

Pt 10

There is evidence that suggests nurses prefer a rule based system of approach to patient care, more so than doctors. Nurses may see guideline adherence as being synonymous with professionalism, whereas doctors are more likely to reject guidelines and protocols in favour of unwritten rules of acceptable behaviour (McDonald et al., 2005). This may, in part, be due to the fact that protocols and guidelines could potentially impact on nursing roles by facilitating an increase in the role of the nurse and the associated autonomy (Rycroft-Malone et al., 2008). It should be noted however that the McDonald study was undertaken in the secondary care setting, although it could be hypothesised that this is equally applicable to the primary care setting.

All of the practices had thought quite hard about how long specific tasks should take and each one had been allocated a specific duration - which varied between tasks. For example, it was generally acknowledged that the CDM clinics required more time than routine clinics (such as ear

syringing, wound dressings and vaccinations). Consequently, when booking nurse appointments, patients were asked to explain what they needed done and to make a single or double appointment (sometimes even a triple appointment) as necessary. All the activities that nurses undertook were quantified in terms of expected duration.

4.4.3 Consultation Duration

Previous research has suggested that patients do not feel they have enough time with their GPs (Airey & Erans, 1998). Some of the HCPs in this study also felt that consultations were too short. In addition some felt that there was so much to do, in particular as a result of the implementation of the QOF, it was inevitable consultations would have to be extended:

> "*No it (10 minutes for a consultation) is extremely inadequate …I would love to move it to fifteen minute consultations…there are so many people that need seeing in a day, fifteen minute appointments by the same number to see then you would be here more and more time; and each surgery generates the same amount of time in terms of paperwork so it just makes the day much longer*"
>
> HCP 13 (GP)

> "*With some of the extremely complex patients that we now have: diabetic with chronic kidney disease and hypertension, 10 minute appointments to manage all of their problems or to introduce them to new drugs… they are on 5 or 6 drugs and if you introduce some or all of those you need to talk about side effects, managing cholesterol. Ten minutes is not nearly long enough*"
>
> HCP 15 (GP)

> "*I would say that the time is very close when ten minute consultations aren't enough*."
>
> HCP 3 (PRACTICE MANAGER)

For the nurses there was the additional complex issue of the need for flexibility - varying consultation durations depending upon the procedure (see previous section). There was some inter practice variations however double appointments (i.e. 20 minutes) were commonly used for such areas as chronic disease management (e.g. annual IHD, asthma or diabetes reviews) and certain task based activities. Routine appointments were however never longer than ten minutes:

> "*Consultation lengths vary. If I am working in the treatment room we run on a ten-minute appointment system, but in certain areas we give double appointments: things such as ear syringing, smears, certain dressings…. The receptionists have a list which basically says who does what at the consultancy. There are several of us and also what length of time they should offer for different types of treatment in the treatment room so they do have to ask them what they are coming for. I think it is fairly impossible, you need a mix of tens, twenties and even thirties, but its getting the right person, for the receptionist to get the right person, into the right slot because you don't necessarily know whose going to need twenty minutes when they walk in the door*."
>
> HCP 6 (NURSE)

> "*I think when people come to you with several problems at the same time then yes if they have lots of medical problems that they want to sort out at the same time then they need a longer consultation*."
>
> HCP 7 (NURSE)

Whilst the majority of HCPs agreed that consultations longer than ten minutes would be preferable there was one divergent view from a nurse (see quote below, HCP 5). He felt that ten minutes was sufficient as he liked to work fast and continuously – only using ten minute appointments, even for the annual diabetic reviews. Nurses undertaking annual diabetic

reviews in the other practices did not consider ten minutes to be sufficient to undertake a complete review.

> "*What I wouldn't want to do is to then go the other way and have everything being a fifteen / twenty minute slot and having big chunks of time between patients because I'm not as efficient like that. I need to work boom, boom, boom under pressure and I actually feel I give the patients a better service by not having a clinic which is sort of plodding along*"
>
> HCP 5 (NURSE)

The appointment systems with nurses offered some degree of flexibility. However, it was not clear why a nurse needed this flexibility and a GP did not. Practice two, which operated the open access system, offered this flexibility with the GPs as there were no set appointment times:

> "*One of the things I like about the open access surgeries, if someone comes in to see me and they have just been bereaved and they are in an emotional state, that might take me 20 minutes, but because I am not sticking to an appointment schedule I don't feel guilty about giving that person 20 minutes of my time. Equally someone might come in with tonsillitis and it will only be 2 minutes so it evens itself out so I don't feel the pressure then of feeling that I have got lots of people in the waiting room that should have been seen 20 minutes ago*."
>
> HCP 15 (GP)

An area that was explored, in line with the principles suggested by the response of the NHS Confederation to the Government's consultation process entitled "Your Health Your Care Your Say" (Department of Health, 2005e) (see section 2.4), was whether patients should be able to set their own consultation duration. There was unanimous feeling from the HCPs in practices one and three that this would not be appropriate. Practice two, through their open access system, did appear to be offering

this however, ultimately, the GPs still retained control over the duration of the consultation as they had control over ending the consultations:

> "*You can certainly wind the patient up to make them feel that you are not happy with the timetable, looking at the computer, writing things down, not looking at them, ignoring questions and they get a feeling that time is short*."
>
> HCP 16 (GP)

The reasons cited for not putting patients in control of setting their own consultation length were based upon the patient not knowing what was needed and thus how long the procedure will take. However, if the HCP had not actually seen, or spoken to, the patient they too would not know what needed to be done and thus would not know how long a consultation would need to be. Routine appointments were all set at ten minutes thus it would appear that the decision regarding how long a consultation should be had been taken irrespective of the presenting condition:

> "*I don't see how the patient would know without our experience how long a consultation would take. How do they know how long it is going to take when they don't know what we are going to be doing with them?*"
>
> HCP 5 (NURSE)

> "*I think we (GPs) are the gate keepers and I think we have a better idea sometimes of how long something should take*."
>
> HCP 8 (GP)

> "*The reason you are going to see a GP is because you don't know the answer to something, they are the experts. These appointments have been given because they consider it to be the appropriate amount of time*."
>
> HCP 10 (PRACTICE MANAGER)

Other concerns expressed were doubts regarding the benefits to be gained from the additional investment of time. There were two predominant views on this: the more time given the more would be wanted, and, extra time would provide time for a "chat" but this would not necessarily increase the quality of the care or improve health outcomes:

> "*Ten minutes doesn't seem like a long time but I'm not wholly convinced that giving them longer would provide better quality care. I think the patient appreciates having a chat, especially in rural practices like this. It might give them a warm glow but I don't think it necessarily gives them better quality of care*."
>
> HCP 4 (PRACTICE MANAGER)

> "*In some cases you may well increase the quality of the outcome but I also can't help feeling that the more you give the more they want and that you may well end up with fifteen minute consultations and then there will be a push towards a twenty minute one*."
>
> HCP 3 (PRACTICE MANAGER)

From the patient's perspective there was a mix of views. As with many areas initially patients were reluctant to criticise their practices. Further probing, however, revealed the majority of patients felt that they sometimes felt rushed and pressurised by time constraints and that they had not had sufficient time to ask everything they had intended to. Despite this none of the patients were keen on taking responsibility for setting their own consultation duration. Interestingly this was largely because they were worried that it would encourage "time wasters" and people for whom a trip to the doctor was treated as a day out – although that would not apply to them as individuals:

> "*I suppose the longer appointments seemed friendlier. They seemed to take more interest…there is usually this feeling when*

you come out of "oh I meant to ask such and such" but because it has been quite quick you forget…It (setting own consultation time) maybe sounds good but then I think some people might demand it too often…maybe the wrong people would be the ones wanting to take that time"

Pt 11

"Y*ou don't like to mention it because you think you have only got a few minutes so you have got to gallop it out quickly, get out, be pushed out…this sounds like I am being spiteful, I'm not, but one sort of listen and you're hauling your shirt out of the back of your trousers before you have finished telling him what's what*"

Pt 2

"*I find it is a lot more rushed with the doctors and very often he answers telephone calls from other people which I find a little bit off putting*."

Pt 3

Research has demonstrated that patients may in fact self impose time constraints on their appointments, by restricting themselves in order to relieve the burden they perceived the GP to be under (Pollock & Grime, 2002). This particular study was conducted with patients suffering with depression for who time, to discuss their anxieties and concerns, may be considered paramount.

The two clinical areas commonly mentioned by the HCPs as requiring more than ten minute consultations were mental health issues (in particular depression) and gynaecological conditions. The former was mentioned due to the difficulties patients appeared to have acknowledging there was a problem. The general view was that patients tended to talk around mental health issues rather than refer to them directly. They may, for example, present with a relatively trivial condition and discuss this then mention why they had really come at the end of the

consultation. The latter was more concerned with practical issues – in particular the time taken for some patients to undress for an examination and then dress themselves afterwards. An additional problem was that after an internal examination often the patient needed time to collect themselves before they were mentally prepared to take on board any advice or actions.

The “complex” patient (i.e. those with several co-morbidities) was also mentioned. Generally these were not considered a problem in terms of time as all that needed to happen was for the patient to make another appointment and return on another day. For practices that universally considered themselves to be patient centred, the practice of making the patient return on multiple occasions may not be considered particularly patient centred (see section 4.4.1). It was, however, common practice. Additionally there was almost an expectation that appointment times would over run hence this had become accepted as “the norm”.

> “*I would say that the day when everybody’s surgery runs to time and everybody goes in on time and finishes on time I will run round this practice with no clothes on*”
>
> HCP 3 (PRACTICE MANAGER)

> “*Where there are multiple problems you can tell the patient that you are going to deal with this one now but they need to come back and we will deal with that problem another time. I think the areas which will take a long time are areas which are psychosomatic or where there are anxieties or some other mental health problems*.”
>
> HCP 14 (GP)

> “*You see the patient for as long as it takes but if time is becoming of an essence you say, I tell you what I will see you this evening, and that is the beauty of general practice, as long as the patient is*

not a risk, you can bring the patient back that afternoon, or the following day and get it sorted out"

HCP 8 (GP)

Whilst there may be a genuine reason for asking a patient to make a further appointment some patients, such as those who are restricted by times of employment, may have preferred to have one appointment to sort everything. This was not something that was routinely available or offered and suggested that the practices were not be as patient-centred in their approach to patient management as they claimed.

An area where this was common occurred when a patient had several co-morbidities that required regular monitoring. Many of the nurses that ran the CDM clinics specialised in discrete therapeutic areas (see section 4.4.2). Whilst sometimes there was overlap allowing all the conditions to be considered in a holistic approach (e.g. CHD and hypertension monitoring was dealt with during an annual diabetic review) this was not always the case. It was particularly evident when a patient had asthma (or COPD) plus a vascular system problem or diabetes. There was very little overlap between these two clinical areas and unless the nurse was specifically trained in both he only dealt with the area he was competent in – leaving the patient to make another appointment with a colleague.

"*When patients go to the hospital they go to an eye clinic and they go to an ENT clinic, they don't go to the same clinic that covers ears and eyes so I don't have any particular issues around that. If it was the same nurse seeing a diabetic patient and the same nurse seeing COPD fine that would be a bonus but I don't think you need to cover both aspects at the same time*."

HCP 14 (GP)

"It is very much my colleague who does the COPD. If someone came in and presented with and needed anything doing to them and then they said "by the way at the moment my asthma is

causing me some trouble" I would feel competent in order to give that care but if it was anything to do with COPD it would definitely be down to a colleague and I would then refer them on."

HCP 5 (NURSE)

Almost exclusively all the HCPs interviewed discussed CDM in terms of individual disease management. They had accepted several visits as being necessary. Only one HCP mentioned patient inconvenience:

"We are bringing them in twice a year already for hypertension, if we then bring them in annually for the asthma as well, that's three visits a year. If you are working that may be difficult."

HCP 11 (PHARMACIST)

When specifically asked about patients being able to have one complete annual review the responses were generally negative with no practice routinely offering this, even though it was acknowledged it would save both practice and patient time:

"*I have to confess I think it is more by accident than design where that scenario has actually occurred…we could try and tie the two up, it saves our time, it saves the patients time…"*

HCP 3 (PRACTICE MANAGER)

Some of the HCPs felt that it would be inappropriate to consider more than one clinical condition during a single consultation and positively supported the approach of working within defined therapeutic areas rather than across several. Reasons for this included the amount of information a patient would need to be given, and retain, at one time (rather than over two or more occasions), nurse skills and training, as well as practical issues such as room availability and administration staff running efficient recall systems:

"T*he asthma review, for example, takes quite a long time, as does a diabetic review. Each individual review is quite lengthy and I think it is reasonable for them to be separated. I think it might be too much information overload with one or the other. I think things like that are reasonable to be separated except for cardiovascular and diabetes, that is perfectly reasonable to incorporate the two, they overlap, asthma and diabetes, they are quite different really*"

HCP 12 (GP)

"*A diabetic review is a big thing in its own right and so is the asthma review and the skills that are required for those I can't say to you we can link those two up so the patient does it all in one day. Very occasionally it might work like that but it is very difficult because of the room availability and when we run the clinics*"

HCP 10 (PRACTICE MANAGER)

"*Generally we run separate recall systems because certainly the diabetes nurse wouldn't feel happy doing the respiratory assessment. The cardiovascular clinics and the diabetes clinics they tend to be held at specific (but separate) times and recall administration runs a very tight review of these clinics. We ask the patient to confirm that they are attending by a particular time. If they haven't confirmed their attendance then that appointment is cancelled and offered to somebody else or converted to routine nurse appointments*."

HCP 3 (PRACTICE MANAGER)

Whilst it is understandable that patients with busy working lives may find frequent monitoring visits to the practice an inconvenience, the patients interviewed did not seem too concerned. They felt that their health would come first and they would make arrangements to fit in all the appointments. However, the sample size of full-time working patients (who were also not self employed) was quite small (four) and this may not be indicative of the views of the broader population:

"The practice isn't a problem because as far as I am concerned that is my health and that comes before nearly everything as best you can. Blood tests can be a pain, you can go up there (the local hospital) sometimes and sit there for an hour and a half and then obviously they (work colleagues) are thinking: "where have you been? You only went for a blood test"."

Pt 18

"I have a very busy work diary but I am lucky in the sense that my diary is in my control so because I want to get my blood pressure sorted out I have been letting my appointments take precedence over other things. I will cancel meetings if needed"

Pt 19

"No I think it is wonderful (regular routine monitoring) because I might be thinking to myself that I am fine but I come in and get checked and they say this is a bit high. I think it is like prevention."

Pt 2

Despite the fact that patients did not appear to mind returning to the surgery quite frequently, they did not like having to wait beyond their allocated appointment time. This is discussed further in the following section.

4.4.4 Waiting Times

The maximum time that any of the patients were prepared to wait, after their allocated appointment time, was thirty minutes. One patient stated they were only prepared to wait for 10 to 15 minutes beyond their time. Nonetheless, it may be considered that, an extra 30 to 60 minutes wait at a surgery could be a more efficient use of time overall than having to return for a subsequent visit (and perhaps still having to wait up to 30 minutes each time).

This was where the open access system, operated by practice two, demonstrated flexibility and patient choice. It allowed patients to assess how many other patients there were in front of them and to decide for themselves whether they considered their problem to be worth the possible wait (or whether they would prefer to try again on a different day). It provided patients with choice and put them in control. Both GPs and patients alike appeared to benefit from, and approve of, the system. If patients did not like the system there was the option to re-register with another practice as there was sufficient patient choice locally:

> *"There may be 13 patients in front of you, the person will ask at the desk how many people are in front of them, they make a calculation in their mind as to how long it is going to take them. It could be 1½ hours, some of them will walk out of the door because the cost is too high, some of them will stay. So I guess they are making a decision based on how concerned they are about their condition. It would be interesting if you had a system where you could see the nurse straight away or the doctor in 1½ hours. I wonder what would happen?…We are talking trade, we are talking cost"*
>
> HCP 16 (GP)

> **"***I have never waited any longer than 40 minutes, but it does make you think "do I really need to go in?" I think if you have made an appointment you keep it regardless of whether you might be feeling better or the problem seems to have gone away, I think it is much better doing the open access*"
>
> Pt 17

> "*My colleague, he goes to a practice where you have to make an appointment, but like he says, you can't get one…I still like the way my surgery works. If you are ill you can go there and you can see someone, sometimes you can go in and there is no-one there other times you can sit for an hour. On the odd occasion I have*

walked in and asked how many are on the list, 20, I will come back tomorrow… As long as I am not in pain it is fine"

Pt 18

"*I think the longest I have had to wait is a bit over an hour. From past experience with appointments, often having to wait half an hour after the appointment time anyway*!"

Pt 19

The patients in practices one and three were, generally, prepared to wait up to 30 minutes after their allocated appointment time to be seen. Beyond this they would make an alternative appointment and leave. Some patients had waited even longer than the 30 minutes that they felt was reasonable and some were prepared to wait if they were kept informed and did not feel forgotten. One patient felt time was no longer an issue (as he was retired) but would have been if he had been still working. Brief observation of the patients of practice two indicated they were rarely waiting much longer than 30 minutes and they did not need to be informed as they knew to expect it:

"*It would be nice to be told that they are going to be late and how long because sometimes you sit and think have they forgotten me*."

Pt 15

"*It (the appointment) was about 5.10pm, but it was gone 6pm when I went in there*. *That's no good*."

Pt 7

"*We are retired; time makes no difference to us now. Perhaps if we were (working) it would do. If he (the GP) wasn't on time and he was going to be late, we would have to say "sorry, we have to go and I will make another appointment."*"

Pt 4

The issue of allowing patients sufficient time is important. Not only are there a number of variables when considering clinical management, there are also several relating to patients and their individual characteristics. As one nurse put it:

> *"Different consultations take different times. The same consultation for one person may take twice as long for another person. That's the whole issue, because you are dealing with so many variables you can't really say how long the consultation is going to take."*
>
> HCP 2 (NURSE)

HCPs did not feel patients should be responsible for setting their own consultation length (refer to section 4.4.3) as they felt a patient would not know how long a procedure, or discussion of the clinical issue of concern, was likely to require. Yet, ultimately, HCPs had the control over ending a consultation, whether it was open access or a booked appointment. It could therefore be hypothesised that, if the consultation did over run, it was the HCPs who were allowing this to happen and therefore it is them that need more time with the patient. Perhaps it is the GPs who do not have sufficient time with the patient rather than, or as well as, the patient feeling they needed more time with the doctor (Airey & Erans, 1998; Ogden et al., 2004).

Given how long most patients were prepared to wait (and how long open access patients actually waited) the booked appointment system that over-ran was not, in reality, too dissimilar to the open access system. Open access, however, appeared to give patients the feeling that they were setting their own appointment length (as per principle four of the NHS confederation response (see section 2.4)) even if this was not entirely the reality.

4.4.5 Continuity of Care

As outlined in section 4.2.1 practice one had a different approach to the organisation of care than did the other two practices – practice one maintained individual patient lists. The HCPs from practice one felt that continuity of care, as afforded by the maintenance of individual lists, was important to patient care and in being able to care for the patient in a holistic manner:

> "*It (personal lists) gives a more personal service which patients appreciate. I think it is a more efficient way of working because we know the patient's medical background so when we deal with them you don't have to wade though their medical records to find out all the answers to their medical condition…because we are looking after families as a unit that is very helpful information, so it is a strong thing…… people get a much better deal and our consultation list is lower as a result*"
>
> HCP 13 (GP)

Although practice three did not feel the need for individual patient lists, they did suggest that knowing the family unit (and any associated issues) was important when dealing with individual patients. Their ability to achieve this was attributed to being a small practice. Perhaps, by virtue of their size, the practice was able to offer less GP choice and thus was, by default, actually offering individual patient lists:

> "*There are some patients I know very well because I know a bit more about their background and their history. There are a huge number of patients that I know little about - I control their blood pressure, I have no idea what else is going on in their life: when their husband died, how they got through their cancer. I think that makes a huge difference. How can you understand someone's depression if you don't know about the family circumstances?"*
>
> HCP 17 (GP)

> "*You know if you have been here a number of years, as soon as a patient walks through the door they come with family matters, children matters, relationship problems and you know, because you know their relatives, some of what is going on*"
>
> HCP 8 (GP)

The HCPs in practice two, initially, appeared to have divergent views on individual lists. However what they actually disagreed with was the practice deciding which GP the patient should be registered with and, hence, which GP they should see. They felt that the decision as to which GP to consult should be left to individual patients. Once this decision was made they encouraged the patient to continue to see this GP rather than "doctor hopping".

> "*We have never liked that idea (individual lists). We don't think it gives patients enough choice. We have always told patients "find a doctor within the group that you like and, if you can, try and stick to them"."*
>
> HCP 15 (GP)

Another reason cited for disliking individual lists was that individual patients may like continuity but may prefer it with different GPs for different conditions. Such decisions may be based upon real or perceived expertise of individual GPs in a particular area, or may be due to the type of condition presenting (e.g. some females may be happy to see a male GP regarding their hypertension but may prefer to see a female GP regarding conditions involving sexual health or areas that may be considered embarrassing to discuss).

The patients in practice one liked continuity, however, they were not all happy with being "allocated" a GP. They preferred to adopt the method of practice two and choose which GP they wished to have as their registered GP:

> "*I was directed towards a particular GP and when I first went there. I was almost bullied to go and see that particular GP. I had no choice which GP I signed on with, it was just that that list was available. I always felt quite bullied to go and actually I changed my mind, I now go to somebody different and I don't get hassled any more*"
>
> Pt 13

This was also alluded to by HCP 16 (GP) who felt that there needed to be some flexibility over whom a patient consulted with, if for no other reason than different personalities may function well together but equally may clash:

> "*I just act as me and patients either like me or don't. The ones that like me come back, the ones that don't go and find another doctor in the practice. The thing with this practice is you have different personalities with different consultation styles and you don't, fortunately, have to see the same doctor*."
>
> HCP 16 (GP)

It was stated, by one GP, that the partners in practice one "*all manage (our) patients differently*" (both clinically and administratively). This had implications when the practice ultimately decided which partner a patient should register with. Some patients may have preferred a GP who was, for example, keen to use telephone consultations (e.g. in triage or in follow-up consultations) rather than one that did not use telecommunications as frequently. Whilst the practice did demonstrate patient flexibility in that different modes of consultation were employed, it did not provide flexibility for the individual if they were allocated a registered GP. This flexibility was only useful to the individual patient if they were provided with GP choice. It was also commented that having individual lists as well as "*slightly different ways of doing things*" (HCP 13

(GP)) meant the "*nurses have a difficult time*" as they had to adapt their working practices depending upon the patient's registered GP.

Ultimate accountability, should a problem arise, and potential medico-legal issues were also cited as a reason for maintaining individual patient lists. In practice one the GPs considered that individual practice lists made accountability clearer. There was also an acknowledgement, from the GPs in practice two, that risk management, particularly during telephone triage, was difficult "*if you have no personal knowledge of the patient*" (HCP 15 (GP)) – this was also referred to as an issue within the context of the "out of hours" service.

> "*The other thing for me is all to do with accountability. You know the buck stops with me: if I do the blood test then it is me who sees the results and I decide what happens next. It's not I do the blood test and they come back and see someone else and somebody deals with the test results…It means if the patient has an issue or a problem with something not being done properly, or there is an administration problem, it is my problem*."
>
> HCP 14 (GP)

GPs from practice one mentioned continuity of care within the context of referral rates. Within the concept of new ways of working, reducing referral rates was recognised as being the main driver for releasing funds. This allowed reinvestment into other areas and commissioning of further services locally. Although it appeared practice one had lower referral and consultation rates than other local practices, the suggestion that this was as a result of individual patient lists is difficult to attribute directly.

It was felt that continuity of care alleviated the need for the patient to frequently repeat their history and consequently saved both GP and patient time. However, there were also claims that the increased use of,

appropriate and efficient, computer records reduced the need for patients to repeat detailed histories:

> "*I quite often see a patient that one of my colleagues has seen and the consultation is longer because I almost have to go back to the beginning of where they are, which is probably a communication thing…whereas if you know that patient, know their problems you can then be more efficient in their care*"
>
> HCP 7 (NURSE)

> "*Having said that as computerisation of records is getting better and better, and we are nagging our doctors to put everything on the computer, it should all be there. An agreed care plan should be there for whatever the condition is, so if it is a follow up then you usually make a decision fairly easily*"
>
> HCP 15 (GP)

> "*Those (patients) with long ongoing problems obviously want to see the same GP because they don't want to explain the story again to another face every time they come in*."
>
> HCP 3 (PRACTICE MANAGER)

The above quote suggested that the development of effective IT systems had, to some degree, mitigated the need for individual lists as information should be readily available. However one HCP felt individual lists improved the quality of the computerised records because they had been completed by one individual. This made it was easier to follow what had happened, within a patient's care pathway, and why:

> *"I have two practices, one where the GP always sees their patients. They have a patient individual list. I do think the care at that practice is tighter. I don't know how they manage it, they are all different doctors but somehow or other you know immediately when you go in you can see the care is flowing, it is a much easier*

system...Then you have another practice: When you have to ask a doctor about a patient it's the devil's own to find out which doctor is responsible for that patient…"

HCP 11 (PHARMACIST)

This could be due to the IT skills of the practice concerned rather than as a direct link to individual lists. One HCP felt "*in terms of data quality there's a big issue*" (HCP 1 (Practice manager)) as many HCPs either did not enter data or entered a minimal amount.

The single most common theme in support of continuity of care was that it meant a relationship was developed with the patient. HCPs felt that the development of a relationship supported their role. It developed both a rapport with the patient and promoted the patient's trust in the GP, thus the patient was more likely to follow the suggested course of action. It also provided the patient with "*a more personal service*" (HCP 13 (GP)):

"*I think continuity of care is very important and you certainly get that more when you are doing the chronic disease work than perhaps when you are doing the treatment room work…when you are doing the chronic diseases you do get to know the patient better*"

HCP 6 (NURSE)

"*It (continuity of care) is important because I feel that particular GP will be aware of the processes that has been gone through in order to come to that diagnosis, that it would be more thorough. But if that is the case or not I am not sure. Also, in the days when you used to have a family doctor, when they used to know the history of the family I think that was probably quite beneficial in understanding the difficulties and the social relationships in that family group with dealing with different medical conditions*".

HCP 9

"*If you gain a rapport with somebody, and an understanding, they will then have trust in what you are doing with them, what you are asking them to do. It won't be a 50% increase but I think you will have a better outcome longer term*."

HCP 17 (GP)

The majority of HCPs were supportive of continuity of care with only one alternative view being expressed. Whilst expressing the view, that continuity of care was not beneficial in all situations, the GP concerned acknowledged that it did have benefits sometimes:

"*I do feel that continuity of care is important most of the time, but I do think sometimes it can be quite helpful when there isn't continuity of care. Sometimes if you see somebody else, a patient, if you see a doctor that you haven't seen before sometimes you can get a totally different perspective on your condition and that will bring new light to the management…I hate inheriting other people's diagnoses and assessments, I like to start from scratch myself*"

HCP 12 (GP)

During the discussions around continuity of care no distinction between acute and chronic presentations was ever made. However questioning revealed that, apart from practice one, most GPs felt that an acute condition could be dealt with by any GP – although patients may actually prefer their usual GP due to the trust and rapport they had developed. As long as the GP was reasonably competent in terms of clinical care, which GP the patient consulted made little difference. In practice one it was felt that keeping individual lists, even for short-term acute conditions, though not essential, was beneficial:

"*Acute illnesses don't need to be dealt with by the same person but sometimes we will see someone with an acute minor illness and that actually gives a rapport to the relationship for the next*

time when they come in with their cancer. They have learnt to trust you with something small now they can trust you with something big. There is a lot going on in terms of personal relationships and trust with the doctor/patient relationship so I don't think you can minimise the importance of actually being involved with people with minor things."

HCP 13 (GP)

"*If somebody presents with a sore throat they don't care who they see. We still think it is important because a patient going to see somebody with a sore throat might get antibiotics if they go and see lots of different people. Whereas, if they went to see the same GP, the GP would spend the time educating them saying you don't need antibiotics. So it is actually informing them and giving them information*."

HCP 14 (GP)

"*You get some patients who are quite happy to see a different GP every time they walk in through the door. It is probably an isolated problem and every time they come in it is a different problem so it doesn't matter who they see to deal with it, providing they are appropriately qualified."*

HCP 3 (PRACTICE MANAGER)

The sentiment that continuity of care may help reduce prescribing was also highlighted by one of the HCPs who felt that some patients would "GP shop" until they got what they wanted – and continuity of care reduced this:

"*They (patients) will go and see one doctor and that doctor won't give them what they are asking for, or will say: "Well the appropriate treatment is this", and then they will move to another GP to see if they can get a different answer*."

HCP 4 (PRACTICE MANAGER)

Another variable highlighted with respect to continuity of care was age and its relationship with chronic disease. GPs generally agreed that younger patients tended not to mind who they saw but that the more elderly (and possibly chronically ill) preferred to consult the same person:

> "*The younger patients will tend not to mind which doctor they see. They are not so interested in continuity, they just want to see a doctor on the day of their choice at the time of their choice and then be given the options in terms of their treatment and then make their own decisions… a lot more like supermarket shopping. But then the older patients, particularly those with chronic disease, do like to have continuity... It will be very interesting how the computer generation get on with things once they become more vulnerable…I think vulnerability has a lot to do with it*."
>
> HCP 15 (GP)

> "*I think it is the younger patients, people at work (who are not concerned with continuity of care), it's the 24/7 consumer type of patient who thinks healthcare should be on tap and they would like their healthcare on railway stations, supermarket healthcare basically. People that like that sort of healthcare probably haven't experienced a chronic illness*."
>
> HCP 14 (GP)

Some HCPs did not think it was age that reflected whether or not the patient preferred continuity of care but whether the patient was suffering from an acute or a chronic condition. It was also suggested that continuity of care was more important to some patient groups (e.g. patients suffering from depression) than others. This presented problems in itself as psychiatrists were relatively scarce thus appointments were limited:

> "*We have a psychiatrist on board and his patient base, unfortunately, are the very dependent patients who hang on to*

their doctors, the depressives and the like, and seeking continuity of care with that particular doctor can be quite difficult"

HCP 3 (PRACTICE MANAGER)

When discussing continuity of care the patients had similarly mixed views. Ultimately patients seemed to feel continuity was generally important although not necessarily on every occasion. They wanted the freedom to be able to choose whether they saw the same GP or another one. This choice may alter depending upon the presenting condition:

"*I would be more than happy to go and see another doctor or nurse if Dr xxx wasn't available…I do believe it is better for both the patient, and the doctor, if you see the same person. As well as building up a relationship I think also the doctor gets to know the patient better and the patient gets to know the doctor better… Equally you may get people who don't necessarily like their doctor, or don't get offered to see another doctor, and I think they should have the opportunity to see another doctor, so there are pluses and minuses. I have seen other doctors on occasion for various things and I think at the end of the day when you go and see a doctor if you are ill and the doctor can advise you and make that illness better you really don't care do you?"*

Pt 14

"*For me the most important thing is to see a GP on the day. So I have probably seen six GPs, including locums, in the time when I have been using this surgery and that has never been an issue. The difference now is it being a long running condition and because it's related to lifestyle, actually being able to see the same person who's there and has been through it all, he doesn't have to keep going through the screens all the time probably makes the experience a bit more comfortable. I guess I feel like it's much more than a conversation rather than going through the process*."

Pt 19

> "*No I wouldn't mind if it was somebody I didn't know……. It doesn't necessarily matter if you just doing an MOT sort of thing, but if you have got something wrong and you have got a problem you want to see the doctor and you want to see the same one*".
>
> Pt 3

As with the HCPs, the majority of patients were happy to see any GP for symptomatic conditions but preferred their "regular" GP for chronic disease monitoring. The only divergent view from this was patient three (refer to quote above). This patient, however, then went on to list which GPs he regularly consulted. There were three GPs in the practice and the patient visited one for each of his three chronic conditions, indicating that continuity was important to him in CDM.

Reasons for preferring continuity of care were varied but the emergent themes were the same as those expressed by the HCPs, the development of a relationship, to aid rapport, build trust and to avoid multiple repetitions of the history:

> "*I have stayed with this particular doctor, he is very helpful, very caring, it's almost like a friendly relationship rather than a professional, which is good because you relax and you are not afraid of asking any questions"*
>
> Pt 2

> *"Your own understanding and confidence in a particular doctor has a great deal of importance in how you react."*
>
> Pt 6

> "*Now I have got quite a long standing condition, as it were, which means I am going more regularly, having a relationship with the GP is more important than it was in the past*"
>
> Pt 19

The patients concurred with the HCPs that older patients tended to prefer continuity of care, however, it was also commented that this could be more condition orientated than age. It is not clear whether continuity of care is something that is preferred due to increasing age (and older people feeling more vulnerable) or whether it was because older people were more likely to suffer with a chronic illness. Patients did prefer their chronic disease to be managed by someone they had a good relationship with but did not mind who treated their symptomatic (acute) conditions. Another influencing factor may be that older members of society were used to a service provided by "the family doctor" and they may like this and be resistant to change. In more recent years there has been the introduction of OOH co-operatives and walk-in centres, thus patients, should they chose, may potentially have less exposure to the "family doctor" who provides all the medical care. It will be interesting to see if attitudes alter as the population with potentially less exposure to the "family doctor" scenario age and begin to develop more chronic conditions.

As the younger population ages and develops more chronic conditions if their attitudes do alter, and they prefer continuity of care, provision of health care may need another radical overhaul. From this study it was apparent that some practices already struggle to provide the level of continuity patients would prefer. The practice managers felt that these issues were highlighted by their annual patient survey. Some practices indicated that they fared badly on the "access to the GP of your choice" question:

"*It was a criticism last year when we ran our patient survey that continuity of care was something we could improve on*."

HCP 3 (PRACTICE MANAGER)

"*Complaints to receptionists are more likely to be seeing the GP that they want to see in the time they want to see them*."

HCP 4 (PRACTICE MANAGER)

Practices had been introducing new methods of working to try and alleviate some of these complaints and comments (e.g. telephone triage) however, with an ever-ageing population, advances in medical technology within primary care and increased patient expectations more radical steps may still be required. There needs, however, to be a balance between increased patient demand and continuity of care. Discussions regarding what this balance may look like lead on to the subject of possible practice mergers (and the use of "polyclinics"). – developing economies through scale. This will be discussed briefly in the following section.

4.4.6 Practice Size and Mergers

Whilst discussing the balance between continuity of care and the availability of time the topic of practice mergers providing economies through scale was introduced. Only practice two indicated that they would consider merging. Their preference was for a "large scale" model: several practices merging to maximise upon the benefits of economies of scale and provide a whole range of on-site services for their patients (including specialist services such as X-ray). Practices one and three both felt that their current practice size (despite practice one being twice the size of practice three) was optimal.

"*There is an economy of scale: You could see more patients with fewer GPs, you could expand the nursing role for nurse triage and nurses managing chronic disease. It would be a much more*

efficient use of a doctor's time and also you might have clinicians who, for instance, I have a partner who is extremely good at statistics and analysis and who is interested in that kind of thing and you might let them do just that work and no clinical work or very little clinical work. In a small practice you can't afford to do that, in a larger practice it would allow you much better use of individual doctor's skills."

HCP 15 (GP)

One of the reasons cited for wishing practices to merge were the problems a small practice experienced in having appropriate expert advice in non-clinical areas such as IT. IT was an area commonly cited as being an inefficiency as well as the reason for some new initiatives not developing as fast as otherwise they might (e.g. Choose and Book – see section 2.2.1).

"*One of the major problems we have being a small practice is managing the IT. We get very poor IT support from the PCT. It is hugely time consuming if something goes wrong with the computer. To have a proper IT set-up that is managed by a proper IT department would be immensely beneficial, it would certainly save an awful lot of practice manager and admin. staff time*"

HCP 15 (GP)

Two of the other GPs appreciated the argument for the merger of practices and were aware of the benefits of economies of scale but were still not in favour of large practices. The reasons behind this appeared to be the less tangible, or more emotional, aspects that it was felt a smaller practice offered – both to the patient and the staff:

"*The only reason for merging is for economies of scale. I do not believe that you could improve clinical care. If you increased your nursing core that could in theory improve your clinical care. You might improve the pool of doctors that you have and therefore the*

cross speciality of doctors might bring but I think it is marginal. I think there is a lot of beauty in small practices. I think if I was a patient I would much rather be in a small practice where I know everybody personally. I am not for all these large super practices particularly"

HCP 14 (GP)

"*You would have to throw out a lot of the things that you enjoy about general practice*"

HCP 16 (GP)

The other HCPs also showed a mixture of responses when considering the merger of practices. There was support for offering an extended range of services but it was felt that any advantage may be offset by the loss of continuity of care and services offered being too impersonal.

"*It could work (merging practices) but I don't see what you are gaining because, in fact, I think the care would be less because as there are more personalities involved, who all have their own little ways for doing things, then potentially that is when you are going to run into trouble with personalities…It's not so much the patient list size it's introducing more health care professionals, then you are not going to get that continuity potentially. I don't know what you are gaining*"

HCP 5 (NURSE)

"*We can be more structured than if you are in a small practice where you just can't employ the extra staff to do it...I think we are big enough already, I don't agree with super surgeries. I think it just becomes too impersonal, I think you are going to be lacking in continuity*"

HCP 6 (NURSE)

The practice managers expressed some concerns regarding continuity of care if practices did merge however they were also more accepting of mergers due to economies of scale and, in particular, space. All the practice managers expressed concern about having sufficient treatment rooms to provide the relevant clinics and be able to develop services.

From the patient's perspective large practices unanimously received a "*no*". The patients were not interested in economies of scale or financial benefits. They were interested in personal service and felt getting to know staff well and friendliness were important. This was universal across patients from all three practices. It was not clear whether these views were based on previous experience of large practices; the patient's fear a practice may become as large and "*impersonal*" as a hospital or whether it was a general fear of change. Only one patient (patient 8) said they "*wouldn't mind if (I) could see the doctor (I) wanted to*", thus still demonstrating the importance of the relationship and continuity of care. Examples of other comments received were:

> "*It would become very impersonal you would see so many different doctors, I think these smaller ones it is much more personal and you get to know the staff as well*"
>
> Pt 15

> "*No small is lovely as far as I can see and talking to other patients from other practices, which are bigger, it then gets impersonal and they don't get half the quality of treatment with practices that could have a dozen doctors. I don't think so, they might have benefits financially but finance isn't going to make me feel any better*."
>
> Pt 3

> "*I think it would become more impersonal with so many doctors…No the smaller as far as we are concerned is better as long as we get service that's all that matters. I think if you have got more doctors whoever you would want to make your*

appointment with like Dr xxx perhaps he would be too busy and you would be put on to another doctor and I would prefer to wait unless it was absolutely necessary."

Pt 4

One potential benefit that did emerge from the idea of merging practices was the utilisation of an extended primary care team that could encompass social care and more counsellors – potentially this could also alleviate problems associated with having the necessary expertise, in particular with respect to mental health, within the practice.

Many of the HCPs suggested that one of the most difficult aspects of their job was being presented with a problem that did not necessarily involve a medical solution, and therefore being limited in helping that patient. Invariably the scenarios described involved social problems that manifested with medical consequences, e.g. mental health issues (especially depression) and obesity.

"*I have a patient who says "my husband died three years ago, I hate living on my own, my daughter lives in Cambridge, I see her twice a year, I go out once a week with friends but I really hate being in the house on my own, I am miserable, I have had a dreadful day doctor, I have had a dreadful week doctor". I know every time she comes in she will say that to me. I saw her this morning; she says "I have had a dreadful week doctor". I sit quietly and listen. She ends the consultation; she goes away and comes back in four weeks time to tell me the same thing again. I can't help that person. I can't change her life structure. I keep her going because she likes to come in every four weeks. Not very good medicine, not good use of my time perhaps but it keeps her going. Actually what I would like to be able to offer her is cognitive behavioural therapy because I think she would do very well if she had a really structured approach*."

HCP 17 (GP)

4.5 Summary

A number of broad themes emerged from analysis of the interviews in this phase. From the perspective of the health care professional the QOF, non medical prescribing (including roles and responsibilities and skill mix) and out of hours (weekend and evening working) all generated diverse opinion. In addition to these areas, the approach to consultations (shared decision making and patient centredness), consultation duration, waiting times and continuity of care also produced some interesting and wide ranging discussions.

It was considered that the QOF helped to provide good evidence based medicine with targets that were quantifiable and measurable but had possibly introduced a "tick box" culture to consultations. This seemed contrary to health policy ideals of a patient centred approach to consultations. The tick box culture was not necessarily considered "bad" medicine however it potentially detracted from the patient's agenda and caused HCPs to focus upon areas that were not considered as important to patients. Health care policy was encouraging HCPs to provide patient focused consultations. The QOF may have been counterproductive in this respect if it concentrated too much upon areas that were of less importance to patients and detracted from the patient's agenda. It was also felt that the QOF had produced a shift to a more scientific / clinical approach to medicine but had possibly caused a loss in some of the more emotional / supportive aspects of consultations. Finally, there was also a debate regarding whether or not the tick box culture of the QOF translated to improved health outcomes for the patient and how it had increased practice workload – for the administrative staff and, in particular, for the nurses who were largely responsible for running the CDM clinics associated with the QOF. The GPs appeared to consider that this was because nurses operated well within a structure of templates and protocols.

Even though it was acknowledged that nurses, by and large, ran the CDM clinics when it came to the suggestion that appointments, for routine CDM monitoring, should be offered evenings and weekends it was felt a GP would need to be present. This raises questions regarding skill mix and clinical responsibility. It was not clear why the HCPs felt a GP had to be present at weekends / evenings for routine CDM consultations when Monday to Friday the nurses ran the clinics, sometimes without a GP on the premises. This potentially supports the research by Charles-Jones et al., (2003) which suggested that in deciding the levels of responsibility and so defining the division of labour and any shift in professional boundaries, the GP retains, and reinforces, their hierarchical status.

Furthermore the activity of signing the prescription may also reinforce the hierarchical status of the GP. As outlined in section 2.3.2, when the topic of non-medical prescribing was discussed, there was an indication that clinical responsibility in terms of assessing the patient and deciding upon the appropriate course of action was not the issue where non-medical prescribing was concerned. The issue appeared to be related to the responsibility for signing the prescription and that perhaps this action also reinforced the hierarchical status of the GPs. It could be argued that having allied healthcare professionals signing prescriptions erodes the virtual monopoly GPs have held over prescribing. However, work by Cooper et al. (2011) indicates this is not necessarily the case. Their work indicated that although supplementary prescribing was considered acceptable and could be successfully achieved (in a range of clinical settings) it had not challenged medical dominance. Reasons for this were varied but included doctor's control over access to training (in particular nurse access to), frequent recourse to doctor's advice and doctor's encouragement of "knock on the door" prescribing advice.

Whilst there were some disparities between how patient centred GPs felt their consultations were and how patient-centred the patients felt their consultations were, there was broad agreement that consultations were

more patient centred than perhaps a decade or more ago. There was also broad agreement, from both HCPs and patients, that continuity of care for chronic disease management was beneficial, although for acute conditions this was less clear cut. Similarly whilst some patients liked continuity of care for their chronic conditions it appeared that this may be with different HCPs for different conditions – depending upon the degree, or perceived degree, of speciality. The GPs appeared to consider that continuity with the same GP for all chronic conditions was important. This resulted in a disparity when the provision of care during evenings and weekends was discussed. Whilst GPs felt that continuity of care was important Monday to Friday, they were not keen to have that responsibility over weekends and during the out of hours period. In addition the nurses tended to operate specific chronic disease management clinics, thus a patient might attend with different nurses for different conditions thereby not providing the same degree of continuity that the GPs considered necessary. Generally speaking all the HCPs, whilst acknowledging time savings in having patients attend one clinic for all their conditions, felt each condition should be monitored separately. The majority of patients did not seem to consider this a problem.

In terms of consultation duration, none of the HCPs felt patients should set their consultation length. Even in the practice that operated an open access system the GPs appeared to be the ones who decided when the consultation should end. The open access system did, however, permit some degree of flexibility in allowing the patient to decide how long they should wait for a consultation depending upon the perceived seriousness of their condition. Other patients made this decision based upon how long after their allocated appointment time they were prepared to wait – with 30 minutes generally being stated as the maximum. The duration of nurse appointments were determined by the practices, depending upon the task to be performed.

It was considered all of the above areas warranted further investigation across a broader representation of the population – both professionals

and patients. Two separate, but related, questionnaires (one aimed at HCPs and one aimed at patients) were thus developed for a quantitative phase to this programme of work. The aim of these questionnaires was to further investigate the themes identified above. As experience and knowledge of choose and book and practice based commissioning appeared limited within the first phase of this study it was decided not to pursue these areas. The quantitative phase to this programme of work (phase two) will be discussed in more detail in chapters five and six.

Chapter 5: Method - Phase 2: Attitudinal Questionnaire

5.1 Introduction

This phase of the programme of work was to determine the prevalence of some of the issues and views identified through phase one, the qualitative phase, of the study. It was designed to test the prevalence through attitudinal statements and to explore the robustness of the constructs associated with the views identified and whether they varied across different professional groups or with differing demographics.

Two separate, but related, surveys were developed (one for health care professionals and one for patients). The purpose was to determine whether the key themes identified through phase one, expressed by both the health care professionals and patients, were representative of the wider population. The specific themes identified for further investigation were selected because phase one highlighted them to be of importance to HCPs and / or patients, plus they were popular areas for discussion within the medical press (refer to chapter 2). The areas selected were:

- Non-medical prescribing (NMP): in particular, roles and responsibilities, chronic disease management (CDM) and skill mix.
- The quality outcomes framework (QOF): its potential focus on a “tick box” culture versus patient centred care.
- Out of hours (evening and weekend cover): with a focus on provision of continuity of care and running CDM clinics for those patients that work or have other “work hour” commitments.
- The organisation of consultations: including shared decision making and the provision of patient centred care; consultation duration and waiting times; and, continuity of care.

5.2 Aim and Objectives

5.2.1 Aim

To investigate the prevalence of views of professionals and the public on specific issues associated with the optimal use of NHS resources and the most effective skill mix of health care professionals.

5.2.2 Objectives

- To investigate, using a quantitative survey, whether the views of patients identified in phase one are representative of a broader, demographically diverse, population.

- To investigate, using a quantitative survey, whether the views and key themes identified in phase one are representative across / between the different health care professional groups.

- To examine the views and attitudes of patients and health care professionals in the following areas: skill mix, non medical prescribing (NMP), continuity of care, time to consultation, preferred HCP, consultation duration, access, shared decision making and waiting times.

5.3 Development of the stages of method utilised

5.3.1 Introduction

Phase one of this study was concerned with identifying experiences, views and concerns of both HCPs and patients regarding new ways of working and the direction of travel of the NHS. To capture the essence of the situation it was decided a semi-structured qualitative approach would be appropriate for that phase – giving respondents the time and flexibility to express potentially wide-ranging views. The intention was to utilise this exploratory approach to inform a questionnaire which could then be applied to assess the extent to which these views were representative of the wider population, encompassing different professional groups as well as differing demographics. The questionnaire(s) would form phase two of the study – the quantitative phase. It was considered that an overall combined, qualitative and quantitative, approach would provide valid findings of a representative sample. The qualitative phase would be "tapping reality" (Strauss & Corbin, 1998) and informing the themes for

the quantitative phase, which would assess how representative, of a wider population, these themes were.

The second phase of this study consisted of two arms, each using separate but related questionnaires – one that involved the responses of health care professionals (HCPs) and one involving the responses of patients. Each arm consisted of an anonymous questionnaire that utilised attitudinal statements based upon ideas and data generated from the previous qualitative study (phase one – see chapters three and four). Against each statement the respondents indicated their preference using a five-point Likert scaling (strongly agree, agree, no opinion, disagree, strongly disagree). The questionnaires were distributed between September 2009 and February 2010.

5.3.2 Quantitative methods

Qualitative methods, as described in phase one, produce information on the particular cases studied only, however findings can be used to generate hypotheses. Quantitative methods can then be used to verify which of the hypotheses are true. Likert scaling was selected as the preferred rating scale because it allows for “degrees of agreement” (Oppenheim, 2004) rather than a dichotomous (yes or no) scale. The use of a Likert scale gives a wider range of possible scores for responses to questions – giving an opportunity to undertake analyses such as factor analysis. The number of responses (five) was chosen to give what was considered a good balance between increased number of responses and difficulty in answering. Using an even number of responses was initially considered to “force” the respondent to select one side or the other between “agree” or “disagree”. It was however felt that, given the rapidly changing nature of the subject matter at the time of the study, there may be questions to which respondents genuinely did not know sufficient about the subject to be able to comment (as demonstrated in phase one when several topics were subsequently omitted). For this reason it was decided to include a fifth level of response “no opinion”.

Due to the large number of variables a factor analysis approach was utilised and the programme “Statistical Package for the Social Sciences” (SPSS) version 14 was used for this. Rather than test a hypothesis the factor analysis approach takes a large dataset and reduces this to a smaller set of factors or components (Pallant, 2007). It looks for groups of inter-correlations between the variables and is commonly used in the evaluation of scales (such as Likert scales) and in exploratory work (exploratory factor analysis) to interpret how variables “hang” together i.e. if a respondent selects, or responds positively to, variable “x” are they also likely (or not) to select, or respond positively to, variable “y”? The process of exploratory factor analysis is described in more detail in chapter six.

5.3.3 Sample size and predicted response rates

As there was no previous data available to calculate sample size, three considerations informed the sample size for this research:

I. Sample sizes (with confidence intervals) appropriate for achieving the views of a specified number of the target population.
II. Sample sizes used in comparable previous factor analysis research, and,
III. The response rates from the target populations achieved in previous research of this nature.

There is much debate in the literature regarding the number of responses required to accurately inform a factor analysis study such as this. Whilst it is agreed that larger sample sizes give more accurate loadings, with less variation across repeated sampling, there are a range of opinions on what this value is and how it should be obtained. Some argue that the absolute number (N) is important, whilst others are in favour of the subject to variable (STV) ratio (p) (Online educational research journal, 2011).

In terms of the absolute number it has been argued that this could be anywhere between 100 (Arrindell and van der Ende, 1985) and 300 (Norušis, 2005), or it could be between 100 and 1,000 plus whereby: 100

= poor, 200 = fair, 300 = good, 500 = very good, 1,000 or more = excellent (Comrey and Lee, 1992). It has also been suggested that, to support chi-square testing, there should always be at least 51 more cases than the number of variables (Lawley & Maxwell, 1971). From the perspective of the STV ratio it has been argued that this could be anywhere between five (MacCallum et al., 1999; Arrindell and van der Ende, 1985) and 20 (Hair et al., 1998) subjects per variable, or that it could be two subjects per variable as long as N is not less than 100 (Kline, 1979).

Previous research (Hobson & Sewell, 2002; Weiss et al., 1996) and advice from Gloucestershire PCCAG (Primary and Community Care Audit Group) suggested that 150-200 responses were required to inform this type of descriptive research. For example, a final sample of 217 responses will reflect the views of 500 patients or health care professionals within a 95% confidence interval (glospccag, 2010). Finally, experience and published papers and articles, suggest that amongst health care professionals (GPs in particular) response rates to postal questionnaires are often poor (Edwards et al., 2002; Bowling, 2002; Black et al., 1998) and can be as low as 30%. Other research suggests that response rates from patients are higher but still may only be in the region of 50-60% (Richards, 1999).

Following the above considerations, it was decided to aim for between 150 and 200 resulting questionnaires from HCPS and from patients. This would mean distributing 300 patient questionnaires to get approximately 150-180 responses and 800 HCP questionnaires to get a return of approximately 240 responses.

5.3.4 Ethical applications, approval and considerations

5.3.4.1 Ethics application and approval

A full application to Frenchay (Bristol) REC was submitted in February 2009. The application was reviewed, in the presence of the researcher, at

the committee's meeting on 20th March 2009 (REC reference number 09/H0107/12). Further information and clarification was subsequently requested by the committee. Upon submission of the additional information a favourable ethical opinion was granted in July 2009 (see appendix 2.1).

5.3.4.2 Ethical considerations

Individual consent to participation was deemed given upon completion (and return) of the questionnaire. A Freepost reply envelope accompanied all questionnaires. Participant information was provided at the beginning of the questionnaire rather than in a separate information sheet.

To minimise any difficulty for reception staff in handing out patient questionnaires exclusions were kept to a minimum. Upon the recommendation of the local ethics committee only unaccompanied patients under the age of 18 years were excluded. It was, however, agreed that the questionnaire could be handed to an accompanying parent (of a patient under the age of 18 years) to either complete from their own perspective or on behalf of their child. It was considered that both viewpoints would be equally valid. There were no other exclusions.

All questionnaires were anonymous and requested basic demographic information only (refer to section 5.3.5.2). No identifiable patient / HCP data was collected. The researcher did not know which patients were / were not handed questionnaires or which HCPs returned their questionnaire. There could be no follow-up of respondents. All data, including demographic data, from completed questionnaires was entered onto a computer against a patient / HCP number only. The computer was password protected and all completed questionnaires were stored in a locked cupboard.

5.3.5 Questionnaire Design

From phase one issues around nine key themes emerged. These informed the construction of the statements which were then grouped together to comprise the *a priori* ("before testing") groupings. The nine themes were:

i Generalism versus specialism
ii Skill mix and deskilling
iii Roles and responsibilities
iv Chronic disease management (CDM)
v Relationships and continuity of care
vi The Quality Outcomes Framework (QOF)
vii Non-medical prescribing (NMP)
viii Specialist clinics and frequency of visits
ix Consultation duration and patient centred care

These groupings were used to inform the questions within each of the questionnaires.

5.3.5.1 Questions – by section

All of the quotes (held within N*DIST NVIVO) for each of the themes were interrogated closely to obtain appropriate attitudinal statements with which respondents could either agree or disagree. Initially quotes utilised were selected if they represented polarised views of one of the *a priori* groupings. As far as possible the statements were kept as close as possible to the original quote. To enhance reliability (and test if respondents answer one opposing statement negatively and the other positively) if opposing quotes could not be found, but a particular statement within an *a priori* theme was considered interesting, an opposing statement was developed. In addition, all of the statements had to be phrased such that respondents were able to interpret them as stand alone statements. They also had to be designed to ensure it would be reasonable to either agree or disagree with each one – a statement with which everyone agreed would not be of use. For these reasons it was

necessary to adapt parts of the original quotes. This was done by the main researcher and confirmed with the academic supervisor.

For the HCP questionnaire appropriate statements were found that covered all nine of the above themes. The patients expressed views most strongly on the subject of consultation length and patient centred care. No relevant patient quotes were found for themes (i) (specialist versus generalist), (iii) (roles and responsibilities), (iv) (chronic disease management) or (vi) (QOF). Although the *a priori* themes consisted of nine separate groupings of statements, there was overlap between many themes with some questions / statements sitting well within more than one theme. Thus it may not be that patients did not have any relevant views on, for example, “roles and responsibilities”, more that it was considered that the views they did express fitted more appropriately into a different theme. A breakdown of the number of statements, within each theme and by group, is given in table 7 below (see appendix 2.2 and 2.3 for questions within themes).

Table 7: Number of statements for each *a priori* assumption

A priori assumption	**No. of relevant HCP statements**	**No. of relevant pt. statements**
Specialist vs. Generalist	2	0
Skill mix and deskilling	5	6
Roles and responsibilities	9	0
Chronic disease management (CDM)	6	0
Relationships and continuity of care	7	6
Quality Outcomes Framework (QOF)	7	0
Non-medical prescribing (NMP)	7	2
Specialist clinics vs. frequency of visits	5	2
Consultation length & patient centred care	4	12
Totals:	**52**	**28**

The selection of questions was carefully scrutinised both to confirm that they did address the main issues highlighted in phase one and to ensure appropriate phraseology. They were also assessed to ensure a range of views. The next step was to decide the order – it was felt inappropriate to keep questions asking polarised views close together. The order of the questions was initially decided by simply drawing the question numbers from a hat. The format was then scrutinised to ensure no "same theme" questions were presented close together. As all questions were about views and all (although correlated within a theme) could be considered as stand alone questions in their own right, there was no need for "funnelling" (starting off with a very broad question and then narrowing the focus to a very specific opinion) (Oppenheim, 2004). For the HCPs two questions did need to be written in two parts – one appropriately phrased for GPs and the other for nurses / pharmacists.

In an attempt to ensure the best possible response rates, and on advice from the Ethics committee, it was decided to minimise paperwork by including information regarding the study as a sheet at the start of the questionnaire (rather than as a separate sheet). The information stressed the importance of this being a study regarding views only and that there were no right or wrong answers. It also highlighted the confidential nature of these views and that it was entirely voluntary (for patients it re-assured them that their care would not be affected in any way).

5.3.5.2 Demographic data

The final section of both questionnaires related to demographic details of the respondent. As each questionnaire was already quite lengthy it was decided to keep this section to a minimum requesting data for only a small number of variables. It was also decided, in line with good questionnaire design recommendations (Oppenheim, 2004), to put the questions requesting demographic and personal information at the end.

For the HCPs this included data on age, gender and working pattern (such as number of hours worked, locality, practice size and professional

group). If, as in the case of some pharmacists, more than one practice was worked in, details for their main practice were requested. In the case of all the pharmacists and nurses this section also included a question relating to whether or not they were qualified as a non-medical prescriber (NMP).

For the patients this section requested details of age, gender, attendance (or not) at higher education, any chronic medical condition and whether or not regular medication was taken for this condition, as well as a self rated health score for the previous four weeks (very poor, poor, fair, good, very good, excellent).

5.3.5.3 Pilot Study

To ensure that both questionnaires were readable and relevant to their respective target populations the first draft of each one was piloted – both for content and presentation style (for example, it was produced in both a landscape and a portrait format and tried with different fonts). The HCP questionnaire was piloted using three GPs, three nurses and three pharmacists known to the main researcher. The patient questionnaire was piloted on 10 friends and family members, across a range of ages, and all registered with practices not in the selected practices.

The main concern identified by the HCPs was the length of the questionnaire and whether or not this would lead to a poor response rate. This was reviewed but it was felt that each area was relevant, thus no amendments were made. Upon feedback from the piloting patients minor amendments to wording, for clarity purposes, were made on the patient questionnaire. The landscape style questionnaire was preferred by both groups and thus selected as the format of choice. Final questionnaires are in appendix 2.4 (patients) and 2.5 (HCPs).

5.3.6 Main Study

Ethical approval was obtained in July 2009. As this is often a particularly busy time in General Practice, due to annual leave commitments, it was

decided to delay the start of the study until September 2009. All mailings occurred between the end of September 2009 and the end of November 2009 and had a timescale, for responses to be returned, of two to three weeks. However, some patient responses were still being received during January 2010, with comments indicating that some practices had only just handed them out.

5.3.6.1 Sampling

To facilitate response rates all questionnaires (both HCP and patient) were accompanied by Freepost envelopes (Edwards et al., 2002) addressed to the University of Bath. In addition, the HCP questionnaires were all posted in individually personalised envelopes (Edwards et al., 2002).

5.3.6.1.1 Health Care Professionals

Anonymised questionnaires were sent to all GPs and Practice Nurses working in locality one (total numbers: 424 GPs and 286 practice nurses).

The same questionnaires were also sent to all Practice Pharmacists (i.e. those working in Primary Care rather than Community Pharmacy) working within three regions in the South West and Midlands. Due to relatively low numbers of Pharmacists working within primary care, in locality one, it was considered necessary to extend the geographical area for them so that a representative sample of views would be obtained (total number: 93). A total of 27 (29%) questionnaires were handed out to practice pharmacists working within locality one. These were all handed out by the main researcher. A further 40 (43%) questionnaires were handed out to practice pharmacists working in locality two and 26 (28%) to those working in locality three. In the latter two areas the questionnaires were handed out by a second party – the lead pharmacist for the area - at one of the team meetings.

As stipulated by the ethics decision (see section 5.3.4.2) none of the questionnaires were coded thus there was no follow-up of Health Care Professionals (HCPs).

5.3.6.1.2 Patients

A letter, outlining the study and requesting permission for patient participation (see appendix 2.6), was made to thirteen GP practices within locality one. Practices to participate were selected initially based upon geographical location (rural, urban, city centre), practice size and demographics of locality. The intention was to reflect patient views as broadly as possible through selection of a diverse GP sample. Eleven, of the thirteen, practices agreed to participation.

Within selected practices reception staffs were asked to prospectively hand out questionnaires to approximately 40 patients who arrived, consecutively at the practice, for an appointment with either the GP, nurse or pharmacist. It was anticipated that approximately 300 questionnaires, in total, would need to be handed out to give sufficient patient numbers to inform this arm of the study (refer to section 5.3.3). The researcher did not know who was / was not handed questionnaires thus there was no follow-up of patients.

5.3.7 Feedback of results (HCP and patients)

Any respondent requesting feedback from the questionnaire, in response to an offer in the covering page accompanying the questionnaire, was to be sent a brief summary of the results during March 2010. There were no such requests.

5.3.8 Analysis of results (HCP and patients)

The plan for data analysis was to undertake a factor analysis. All data was entered into, and analysed with, SPSS software version 14. Two data files were created, one for the HCP arm and one for the patient arm. Variables were entered and individual data looked at descriptively. Inspection of frequencies, for each categorical variable (i.e. gender,

profession, locality, list size) and for each continuous variable (such as age and weekly hours worked) were used to check for input errors.

Questionnaire items were then subjected to factor analysis (refer to next chapter) to test the robustness of the *a priori* assumptions. These key constructs were compared with the *a priori* groupings used to develop the questionnaire statements. Questionnaire responses and key constructs were then explored for their internal consistency, Cronbach's Alpha (Bland and Altman, 1997) (refer to section 6.2.2) values were used to investigate their reliability. All statistical tests were applied at the 5% level of significance ($p<0.05$). Details on the actual process of factor analysis are outlined in the following chapter (section 6.3 for the HCP arm and section 6.4 for the patient arm).

Chapter 6: Results and Discussion - Phase 2: Attitudinal Questionnaire

6.1 Introduction

The previous chapter outlined the method utilised for the development and implementation of the attitudinal survey (phase two). This chapter will discuss the results of this phase. It will be divided into the following sections: The first section (6.2) will look at the data analysis. The second section (6.3) presents data from the Health Care Professional (HCP) arm of the study, with section 6.4 concentrating upon the data from the patient arm. The final section (6.5) discusses the results of phase two.

Within the HCP section (6.3), the first part (6.3.1) details the respective response rates, section 6.3.2 the demographic detail and the final section (6.3.3) relates to questionnaire responses and analysis. Due to the poor response rate from the patient arm of the study, section 6.4, will concentrate upon the results using descriptive statistics only. It will outline key themes and observations from this arm but these will not be discussed to the depth of the HCP arm. For this reason, and in the interests of trying to get a different perspective for patients, a third, Discrete Choice Experiment (DCE), phase was implemented. This phase will be discussed further in chapter seven.

6.2 Data Analysis

All data was entered into, and analysed with, SPSS software version 14. Responses to the individual questions received values ranging from one to five. A value of one represented "strongly agree" with a sliding scale up to five for "strongly disagree"; a value of three represented “no opinion”. Two data files were created, one for the HCP arm and one for the patient arm.

6.2.1 Factor Analysis

Factor analysis was used, on the full data set, to explore whether or not there were any underlying themes or relationships that could be grouped together into smaller sets or constructs i.e. it “reduces” a large number of related variables into several smaller sub-groups (Pallant, 2007). It was

also used to explore the extent, or robustness, of any relationship between questions in the original nine (*a priori*) theoretical groupings.

For factor analysis to be considered appropriate two things must be considered: The sample size, and, the strength of the relationship between the variables in each sub-group. Appropriate numbers of responses may be influenced by the number of "high loading" variables there are in the data set (i.e. if several variables "hang together" strongly then a smaller sample size may be considered appropriate). Largely speaking a response size of anywhere between 150 and 500 (MacCallum et al., 1999) may be considered appropriate for factor analysis. A sample size of 150 should have several high loading variables (Tabachnick and Fiddel, 2007).

The strength of the relationship between variables can be assessed in two ways:

- Consideration of the correlation matrix (also known as an R-matrix) that is generated by the factor analysis procedure. Coefficients greater than 0.3 are considered appropriate for factor analysis (Pallant, 2007).

And,

- Two statistical measures, both generated by SPSS, will also give an indication of the factorability of the data: Bartlett's test of sphericity and the Keiser-Meyer-Olkin (KMO) measure of sampling adequacy. For factor analysis to be appropriate the Bartlett's test of sphericity should be significant (i.e. $p<0.05$) and the KMO should be at least 0.6 (ranges from 0 to 1) (Pallant, 2007).

6.2.2 Reliability Testing – Cronbach's alpha (α) and Bonferroni

Upon completion of factor analysis the reliability of statements within each theme also needed to be tested. This was done using a test known as Cronbach's alpha. Before the test can be applied, however, it is imperative that any negatively worded statements have their responses recoded i.e. to apply Cronbach's alpha all responses must be "going in

the same direction". The correlation matrix (see section 6.3.3.3.3) was used to identify negatively worded variables. These were then recoded.

Cronbach's alpha has a value between 0 and 1, with higher values indicating that statements, within that subgroup, relate to the theme of that subgroup more strongly. Opinions vary on the level at which Cronbach's alpha is reliable. Values between 0.7 and 0.8 are usually regarded as satisfactory (Bland and Altman, 1997; Pallant, 2007), however values as low as 0.5 may be considered acceptable. It should be noted that higher values are more desirable, indicating greater reliability.

The problem with running larger numbers of statistical tests is that if enough are run, eventually, a statistically significant outcome will be demonstrated – just due to probability (Bland and Altman, 1995). To minimise this a Bonferroni adjustment is applied (Pallant, 2007). This involves dividing the alpha level (of 0.05) by the number of tests performed and using this revised alpha level as the criteria for determining significance.

6.2.3 Mann-Whitney U Test and Kruskal-Wallis H test

Both the Mann-Whitney U test and Kruskal-Wallis H test may be applied to any set of non-parametric data (i.e. data that does not assume a bell shaped curve).

A Mann-Whitney U test may be used to explore differences, in responses to any number of variables, between two groups of respondents (e.g. males and females, young and old, etc.). If, however, there are three or more groups (e.g. GPs / Nurses / Pharmacists or three or more age bands) then the Kruskal-Wallis H test should be applied.

The Mann-Whitney U test was applied to explore differences in views between the various groups. For example this included, between GPs and nurses, nurses and pharmacists, GPs and non-medical prescribers

and males and females. The Kruskal-Wallis H test was applied to respondents divided into 3 age bands: 44 years or younger, 45 – 52 years and 53 years or older. These age bands were selected based upon frequency analysis of age of respondents divided into approximate thirds. Post-hoc Mann-Whitney U tests were then performed on each pairing (i.e. between groups one and two, one and three, and, two and three to investigate which of the three groups were statistically different).

6.3 Health Care Professional (HCP) arm

6.3.1 Methodological considerations

For practical reasons GPs and nurses were selected from across one county only. These may not represent the views of English GPs and nurses as a whole; therefore the generalisability of the results is limited. As it was not possible to identify individual responders, or the practices from which they responded, no comment can be made as to whether or not particular groups (such as single handed practices or access centres) are under or over represented. Although the pharmacists were recruited from across 3 counties, the actual number that responded was relatively low. Thus their views may also not be representative.

Considering the ethical restrictions that did not allow follow-up of non-responders the final usable response rate of 360 questionnaires (38.4%) was considered acceptable. In addition, given the recognised difficulties in recruiting GPs to research studies, and the priority given to clinical and administrative work over research participation (Mason et al., 2007), the response rate for this group was considered quite good. The respondents themselves may introduce bias. Generally those who are keen on the topic will respond, thus a good cross section of views may not be obtained.

A potential source of bias is introduced by the fact that the person to whom the questionnaire was addressed may not have personally completed it. It may have been handed to someone else in the practice

perceived, real or otherwise, to have a particular interest in this area of work. Although the professional group to which the main researcher belonged was not disclosed, the accompanying detail with each questionnaire was printed on School of Pharmacy headed paper. In addition several healthcare professionals would have recognised the name of the main researcher from the contact email address for queries. This may have influenced responses.

During this phase of the study all of the data was collected via self-completed questionnaires. As there was no set time limit for responses, respondents would have had opportunity to think over their answers and thus may have given answers that they considered to be best practice and more socially acceptable.

The main strength of this study is that all the questions were “grounded” in data obtained from the earlier qualitative phase of this programme of work. However, there was no “test-re-test” applied thus it is not clear whether or not views were highly changeable or stable on a day to day basis.

The timing of the patient arm of the study may have limited the response rate for the patient arm of the study. Almost immediately after the questionnaires were sent to the participating practices the DH announced the need for practices to vaccinate at risk clinical groups against the H1N1 ‘flu pandemic. This dramatically increased the workload within primary care and, as such, the handing out of questionnaires would not have been a high priority.

6.3.2 Response Rate

A total of 803 questionnaires were distributed to HCPs during October 2009: 424 to GPs in 83 practices across locality one, 286 to Practice Nurses in 83 practices across locality one and 93 to Practice Pharmacists across localities one (N = 27), two (N = 40) and three (N = 26).

Of the original questionnaires posted seven (three GPs and four Nurses) were returned uncompleted with the statement that the HCP concerned no longer worked at the address to which the questionnaire had been sent. For this reason the total valid response was taken as 796. Table 8, below, illustrates the overall response rate for each professional group.

Whilst low, the response rate for the nurses (35.5%) and pharmacists (32.3%) was comparable with response rates from other postal questionnaires (Dickson, et al., 2004; Douglas, et al., 2007; Magirr, et al., 2004). It is also recognised that response rates (to postal questionnaires) in hospital and educational settings are higher than those from community settings (Badger, et al., 2005). The GP response rate (41.8%) was much better than expected (Edwards et al., 2002; Bowling, 2002; Black et al., 1998). Response rates to individual questions were good across the range of variables explored.

Table 8: Response rates by professional group

Profession	**No. of questionnaires included in survey**	**No. of responses returned**	**Percentage (%)**
GP (N = 424)	421	176	41.8%
Practice Nurse (N = 286)	282	100	35.5%
Practice Pharmacist (N = 93)	93	30	32.3%
Overall (N = 803)	796	306	**38.4%**

The response rates for Pharmacists in locality three (5/26 = 19.2%) and locality two (1/40 = 2.5%) were low. Both localities relied upon distribution by a third party. In locality one, however, the questionnaires were handed

out directly by the main researcher and the response rate was considerably higher (17/27 = 63.3%). Three pharmacists did not supply information on locality and a further four simply stated “varies” – suggesting they may have worked in a number of localities but giving no indication which one(s).

Two questionnaires, both from GPs, were returned only partially complete. One appeared to be due to an oversight – responses to the final page of questions (Q35 – Q52) were omitted but all demographic data was complete. The second contained some responses but then stopped, stating: “stop questionnaire at this point. I will not waste my time with stupid questions. Signed a senior GP in (locality one)”. As both questionnaires did contain responses, both were included in the final dataset – “missing” was coded for the questions that were not answered.

6.3.3 Demographic Data

Overall respondents comprised 57.5% (176/306) GPs, 32.7% (100/306) Nurses and 9.8% (30/306) Pharmacists. Of the respondents 31.4% were male (96/306) and 65.3% were female (200/306), ten HCPs did not record gender (3.3%). The split in gender responses for the GPs was relatively even (47.2% female); national data suggests that the gender split for GPs is approximately 40.1% females (Royal College of General Practitioners, 2006b). For both Nurses and Pharmacists, however, there was a heavy weighting towards female respondents, with 95% (95/100) nurses being female and 77.1% (23/30) of pharmacists. These figures are also similar to national data which suggest that, in the nursing profession, nationally, there are approximately 89.3% female (NMC, 2008); whilst within the pharmacy profession 70% of primary care pharmacists, in England, are female (NHS Workforce review team, 2008). Gender breakdown by professional group is detailed in table 9 overleaf.

Table 9: Breakdown of gender of respondents by professional group

	No. of respondents		% Respondents		Missing data (%)
	Male	**Female**	**Male**	**Female**	
GPs (N = 176)	90	82	51.1	46.8	4 (2.3)
Practice Nurses (N = 100)	2	95	2.0	95.0	3 (3.0)
Pharmacists (N = 30)	4	23	13.3	76.7	3 (10.0)
Overall (N = 306)	96	200	31.5	65.2	10 (3.3)

43.1% (132/306) of respondents worked full-time and 53.6% (164/306) part-time (data was missing for 3.3% (10) of respondents). Considering the Nurses and Pharmacists only 25.4% (33/130) were qualified as Non-Medical Prescribers (NMP), 58.5% (76/130) were not and 16.2% (21/130) did not respond to the question. Data for list size of respondent's main practice is outlined below in table 10.

Table 10: List size of main practice (N = 306)

	Frequency	**Percent (%)**
<3,000	3	1.0
3,000 – 4,999	42	13.7
5,000 – 6,999	48	15.7
7,000 – 8,999	83	27.1
9,000 – 10,999	47	15.4
>11,000	72	23.5
Varies	1	0.3
Total	296	96.7
Missing	10	3.3

6.3.4 Responses to Questions

6.3.3.1 Frequency analysis for each question

All 52 questions had at least one response scoring the minimum of 1 (strongly agree) through to the maximum of 5 (strongly disagree). No question was omitted by a large number of respondents (Questions 21 and 44 were split into two parts – one to be answered by GPs only and one by nurses / pharmacists only). The maximum number of omissions to a single question was 11 (3.6%) for question 42. The number of responses plus mean and median for each question are detailed, below and overleaf, in table 11. Full responses (total count and percentage) for each question (strongly agree (1) through to strongly disagree (5)) are detailed in appendix 2.7)

Table 11: Overall frequency of response Q1 – Q52 (N = 306)

Question	N		Mean	Median
	Valid	Missing		
Q1: Increasing surgery hours to include more evenings and weekends will not improve the overall health of the nation	305	1	2.12	2
Q2: Effective IT systems mean providing continuity of care for patients is no longer necessary	303	3	4.40	5
Q3: It is better to have continuity of care than breadth of clinical expertise	302	4	3.10	3
Q4: Providing continuity of care to an individual patient is more time efficient because you can figure out what is wrong with the patient more quickly	303	3	2.04	2
Q5: The beauty of general practice is that you are a generalist. You don't have to specialise	304	2	2.50	2
Q6: It is good medical practice to try and complete as many of the QOF targets as possible whilst you have the patient there, irrespective of why they came to see you	305	1	3.51	4
Q7: Non medical prescribers save patients' time because they are able to see a health care professional sooner	304	2	3.04	3
Q8: All routine chronic disease management could be undertaken by an appropriately trained non medically qualified professional	303	3	3.44	4
Q9: A good health care professional runs to time and knows how to end a consultation when he/she feels it is appropriate	302	4	2.94	3
Q10: All our routine chronic disease management is undertaken by the practice nurses	303	3	2.86	3
Q11: The problem with specialising is that you deal with a narrow spectrum of conditions which means your skills in other areas do not develop	305	1	2.38	2

Question	N		Mean	Median
	Valid	Missing		
Q12: QOF is a good use of my time because by reviewing lists of patients I may identify someone who has "slipped through the net"	303	3	2.73	2
Q13: It is acceptable for GPs to endorse a nurse's/pharmacist's prescribing decision by signing the prescription without personally assessing the patient	300	6	2.59	2
Q14: Having longer appointments does not necessarily increase a patient's health outcomes	305	1	2.60	2
Q15: Delivery of complex care needs to a patient needs to be co-ordinated by a single individual. This does not need to be the GP	302	4	2.73	2
Q16: Non medically qualified prescribers must take clinical responsibility for their prescribing decisions	304	2	1.67	2
Q17: Nurses and doctors have overlapping skills that make it possible for one to substitute for the other in these areas	299	7	2.68	2
Q18: I like to give patients as much time as they feel they need even if it makes me run very late on my appointments	303	3	3.06	3
Q19: Getting maximum QOF points just means you are an organised practice	304	2	2.98	3
Q20: We should provide routine chronic disease clinics evenings and weekends even if it means establishing a rota of nurses to run them	301	5	3.81	4
Q21a (GPs only): I don't want nurses running chronic disease clinics for my patients because I like to have control over what my patients are doing	176	130	4.13	4
Q21b (Nurses/Pharm. only): I don't want other nurses running chronic disease clinics for my patients because I like to have control over what my patients are doing	136	170	3.74	4
Q22: Nurses' skills should be used only for "routine" or "minor" problems	301	5	4.09	4
Q23: It is better if patients can have all their routine chronic disease management done by one person in a single visit (even if this covers more than one clinical condition)	304	2	2.47	2
Q24: Too much time is wasted having nurses / pharmacists hanging around just to get a prescription signed	304	2	2.47	2
Q25: QOF targets mean it is hard to focus on the patient's reason for coming to see you	305	1	2.85	3
Q26: Non medical prescribers save GPs' time	303	3	2.38	2
Q27: It is better to monitor each condition a patient has as a separate entity using appropriately trained specialists rather than trying to have one person who deals with everything	303	3	3.49	4
Q28: Even if a patient sees many health care professionals, the GPs should retain overall responsibility for their patients	303	3	1.92	2
Q29: GPs' skills should be targeted to the "serious" or "difficult" problems such as patients with complex co-morbidities	304	2	2.46	2
Q30: Non medically qualified prescribers are safer prescribers than doctors because they follow protocols better	305	1	3.41	4

Question	N		Mean	Median
	Valid	Missing		
Q31: Routine health monitoring, irrespective of the presenting condition, is important to the overall well-being and health of the patient	305	1	2.46	2
Q32: Continuity of care is more important for routine chronic disease management than it is for acute / symptomatic conditions	303	3	2.52	2
Q33: Chronic disease management will always be a key role for GPs to ensure they remain in touch with the breadth of general practice	301	5	2.30	2
Q34: One of the liberating aspects of recent changes in general practice is that you can specialise in an area that interests you	304	2	2.62	2
Q35: You should only accept responsibility for signing an acute prescription if you have personally assessed the patient	302	4	2.91	3
Q36: I see QOF as guideline only and it does not constrain me as a health care professional	301	5	2.43	2
Q37: It is better to base clinical decisions on an intuitive assessment of a patient's condition than to be driven by protocols	301	5	2.51	2
Q38: Having patients return for additional visits to see different specialists is better than having a one-stop shop because they get the best patient care possible	300	6	3.27	3
Q39: It is bad clinical practice for one GP to meet all the health care needs of a patient	300	6	3.71	4
Q40: There is no need to provide routine chronic disease management evenings/weekends	301	5	2.34	2
Q41: Risk management is difficult if you have no personal knowledge of the patient	298	8	2.31	2
Q42: It is easier to work as a locum because you are taking each patient's condition on face value without having to address any long standing psychosocial issues	295	11	3.49	4
Q43: QOF is a good thing because it drives good patient-focused clinical care	300	6	2.95	3
Q44a (Nurses/Pharm. only): It is not worth completing the non medical prescriber course when you can just print off the prescription and get the GP to sign it	129	177	3.64	4
Q44b (GPs only): It is not worth completing the non medical prescriber course when you can just print off the prescription and get the GP to sign it	177	129	3.88	4
Q45: I like the structure that QOF provides because it is satisfying to know I have done everything I should for that patient	300	6	3.08	3
Q46: Friday to Monday is a long time for the general public to go without access to routine (not emergency) health care	303	3	4.06	4
Q47: Measuring the patient's height, weight, blood pressure and peak flow, whether it is relevant to the condition or not, is a waste of time	301	5	3.49	4
Q48: As healthcare becomes more complex safer clinical practice would suggest we need to have a team of people, with a range of skills, working effectively together	298	8	1.92	2

Question	N		Mean	Median
	Valid	Missing		
Q49: The benefits of economies of scale, through practice mergers, outweigh any loss to continuity of care	297	9	3.88	4
Q50: NMPs should only prescribe if they adhere to protocols	299	7	2.40	2
Q51: The time and energy spent obtaining QOF points is disproportionate to the patient benefits	300	6	2.60	2
Q52: If you offered routine chronic disease management at weekends you would have to have a GP present	302	4	3.25	4

6.3.3.2 Descriptive analysis on *a priori* assumptions

Although the *a priori* assumptions consisted of nine separate themes, it was acknowledged that there was overlap between many themes with some questions potentially sitting well within more than one theme (see appendix 2.2 for questions referring to each *a priori* assumption). The nine themes were:

i. Generalism versus specialism
ii. Skill mix and deskilling
iii. Roles and responsibilities
iv. Chronic disease management
v. Relationships and continuity of care
vi. The Quality Outcome Framework (QOF)
vii. Prescribing and non-medical prescribing (NMP)
viii. Specialist clinics and frequency of visits
ix. Consultation duration and patient centred care

Frequency analysis of the responses to groups of questions within the *a priori* assumptions is detailed in appendix 2.8

6.3.3.3 Factor Analysis

6.3.3.3.1 Assessment of the data's suitability for factor analysis

Prior to factor analysis, to permit summation of responses later (see section 6.2.3.5), responses to questions 21a and 21b were combined to give one overall response. As each part of the question was asking the same information, albeit from different HCPs, this was considered appropriate. The same was also applied to questions 44a and 44b.

Factor analysis was then performed on the full 52 question data set. The results demonstrated the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was appropriate at 0.720 (to verify data set is appropriate for factor analysis this value should be greater than, or equal to, 0.6 (Kaiser, 1970, 1974)) and that at 0.000 the Bartlett's Test of Sphericity was also significant (the significance value should be 0.05 or smaller (Bartlett, 1954)).

Although the results indicated that factor analysis was appropriate, the rotation failed to converge in 25 iterations and thus a pattern matrix could not be produced. However, the correlation matrix identified 27 questions that contained no high loadings (i.e. correlations greater than 0.3 (Tabachnick & Fidell, 2007)). These questions are detailed in appendix 2.9. It was felt that these 27 questions without high loading were not influencing the strength of relationships within the full data set. Thus, as they were not contributing, it was decided to eliminate them from the analysis.

Using just the remaining 25 question data set the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was appropriate at 0.793 and at 0.000 the Bartlett's Test of Sphericity was also significant, indicating factor analysis to be appropriate.

6.3.3.3.2 Factor extraction

Factor extraction was applied to determine the minimum number of components (also known as factors or dimensions) required to best explain the correlations between the variables.

Two factor extraction techniques were applied to the 25 question data set - Principal Component Analysis (PCA) and Maximum Likelihood. Both extraction methods produced a KMO of 0.793 and a significant Bartlett's Test of Sphericity (0.000). Both methods produced a 7 component pattern matrix consisting of broadly similar underlying themes and one factor extraction technique did not explain any greater variance than the

other – with an overall variance for the 7 components explaining 57.9% of the variance, see table 12 below.

Table 12: Suggested components, and percentage variance, using both PCA and maximum likelihood as the extraction method

Component:	**PCA***		**Maximum Likelihood***	
	Questions	**% variance**	**Questions**	**% variance**
1	r40, 20, r1, 46	21.0%	35, r13	21.0%
2	r43, r45, r12, 51, r34, 25	8.4%	r40, 20, r1	8.4%
3	4, 5, r49, 11, 25	7.6%	43, 45, 12, r51	7.6%
4	38, 27, 39, r11	6.0%	7, 26, 17, 30	6.0%
5	r13, 35	5.6%	r38, r27, r39	5.6%
6	r7, r26, r17, r30	5.0%	5, 4, r49, 11	5.0%
7	36, r25, 31, r51, 17	4.3%	25, 51, r36	4.3%

***** Values preceded with “r” indicate a negatively correlated (“reverse”) question

The Maximum Likelihood extraction method produced communality estimates greater than 1 during iterations and a warning that “the resulting solution should be interpreted with caution”. It was therefore concluded that factor analysis using PCA as the extraction method was the best extraction method. The final factor analysis therefore utilised PCA extraction on a data set of 25 questions.

Kaiser’s criterion (also known as the eigenvalue rule) was used to determine the number of components to be retained for further investigation. The eigenvalue explains the amount of variation accounted

for by the component. Using this rule, components with an eigenvalue greater than one are the only ones to be retained. PCA indicated all seven components had eigenvalues greater than one, as illustrated in table 13 below.

Table 13: Eigenvalues and Cumulative variation for each component

Component	**Eigenvalues**	
	Total	**% Variance**
1	5.24	21.0%
2	2.10	8.4%
3	1.89	7.6%
4	1.50	6.0%
5	1.40	5.6%
6	1.25	5.0%
7	1.07	4.3%
Cumulative variation:		**57.9%**

Inspection of the scree plot (see appendix 2.10) showed a change in shape of the plot ("elbow") at points 2, 4 and 8. Only components above the "elbow" are retained (Pallant, 2007). Potential solutions would therefore retain either component 1 alone, components 1-3 or components 1-7, thereby indicating a single, triple or seven component solution.

However, at this point, it is usually recommended to test whether or not the results could have been generated randomly. A parallel analysis (using the programme Monte Carlo PCA for parallel analysis) will demonstrate this. Only PCA eigenvalues greater than the criterion value from the Monte Carlo PCA for parallel analysis are retained (Pallant, 2007).

The results of the Monte Carlo PCA for parallel analysis showed only 5 components with eigenvalues exceeding the corresponding criterion

values for a randomly generated matrix of the same size (25 variables x 306 respondents). The results are presented in table 14 below.

Table 14: Comparison of eigenvalues from PCA and criterion values from parallel analysis (random eigenvalue)

Component	Eigenvalue from PCA	Criterion value from parallel analysis	Decision
1	5.240	1.556	Accept
2	2.100	1.475	Accept
3	1.888	1.408	Accept
4	1.501	1.347	Accept
5	1.397	1.293	Accept
6	1.250	1.251	Reject
7	1.065	1.204	Reject

The component matrix, of the SPSS output, shows the unrotated loadings of each variable within each component. Most of the items loaded strongly (above 0.4 (Pallant, 2007)) on components 1-5. Component 6 loaded strongly on only one question and not particularly strongly on a further four. Component 7 loaded strongly on only one question and not particularly strongly on a further five. This would suggest, supporting the outcomes of the parallel analysis, a five-component solution is appropriate (see appendix 2.11).

6.3.3.3.3 Factor rotation and interpretation

Having identified the number of components it was necessary to “rotate” them as an aid to interpretation - “rotating” the components allows the questions to be “clumped” together in their pattern of loading (i.e. in order of loading, or level of contribution, within the theme).

Both orthogonal (uncorrelated) and oblique (correlated) rotations were performed. Varimax was the orthogonal approach tried and direct oblimin the oblique approach. Both rotational techniques were tried on both factor

extraction techniques (PCA and maximum likelihood). The oblique (direct oblimin) approach gave the most consistent results that were considered easiest to interpret. As it was assumed that there were interactions between the components (i.e. components are likely to be correlated) it was considered that an oblique factor rotation would be appropriate – this hypothesis is tested further below.

The rotated five factor solution shown in the pattern matrix (see tables 15 – 19 below) details the items, and their respective loadings, on each of the five factors. With eight items loading high (above 0.3 (Pallant, 2007)) on component 1, seven on component 2, five on component 3, four on component 4 and five on component 5. Ideally we would like three or more items loading high on each component, thus this solution is optimal.

Table 15: Pattern matrix – Component 1[5]

Item	Question Number	Load[6]
1	**Q40:** There is no need to provide routine chronic disease management evenings / weekends	r0.796
2	**Q20:** We should provide routine chronic disease clinics evenings and weekends even if it means establishing a rota of nurses to run them	0.735
3	**Q1:** Increasing surgery hours to include more evenings and weekends will not improve the overall health of the nation	r0.606
4	**Q26:** Non medical prescribers save GPs' time	0.502
5	**Q46:** Friday to Monday is a long time for the general public to go without access to routine (not emergency) health care	0.476
6	**Q30:** Non medically qualified prescribers are safer prescribers than doctors because they follow protocols better	0.431
7	**Q49:** The benefits of economies of scale, through practice mergers, outweigh any loss to continuity of care	0.378
8	**Q7:** Non medical prescribers save patients' time because they are able to see a health care professional sooner	0.338

The theme for component 1 (see table 15 above) appears to focus predominantly on evening / weekend working, with a subtext involving the use of non-medical prescribers (NMPs) and practice mergers[7]. For ease

[5] Strong loadings indicated by values greater than 0.3

[6] Use of "r" indicates negatively correlated ("reverse") questions

[7] The lower the loading score the lower the contribution of that question to the overall theme

of discussion component 1 will therefore be referred to as “weekend working”.

Table 16: Pattern matrix – Component 2[5]

Item	Question Number	Load[6]
1	**Q51:** The time and energy spent obtaining QOF points is disproportionate to the patient benefits	0.741
2	**Q43:** QOF is a good thing because it drives good patient-focused clinical care	r0.715
3	**Q12:** QOF is a good use of my time because by reviewing lists of patients I may identify someone	r0.713
4	**Q45:** I like the structure that QOF provides because it is satisfying to know I have done everything I should for that patient	r0.690
5	**Q25:** QOF targets mean it is hard to focus on the patient’s reason for coming to see you	0.675
6	**Q36:** I see QOF as guideline only and it does not constrain me as a health care professional	r0.511
7	**Q34:** One of the liberating aspects of recent changes in general practice is that you can specialise in an area that interests you	r0.326

The theme for component 2 (see table 16) appears to focus predominantly on the Quality Outcomes Framework (QOF). For ease of discussion component 2 will therefore be referred to as “QOF” .

Table 17: Pattern matrix – Component 3[5]

Item	Question Number	Load[6]
1	**Q4:** Providing continuity of care to an individual patient is more time efficient because you can figure out what is wrong with the patient more quickly	0.682
2	**Q5:** The beauty of general practice is that you are a generalist. You don’t have to specialise	0.638
3	**Q11:** The problem with specialising is that you deal with a narrow spectrum of conditions which means your skills in other areas do not develop	0.402
4	**Q7:** Non medical prescribers save patients’ time because they are able to see a health care professional sooner	0.343
5	**Q30:** Non medically qualified prescribers are safer prescribers than doctors because they follow protocols better	0.334

The theme for component 3 (see table 17) appears to focus predominantly on continuity of care and the benefits of being a generalist rather than specialising, with a subtext involving the use of non-medical prescribers (NMPs). For ease of discussion component 3 will therefore be referred to as “benefits of generalism”.

Table 18: Pattern matrix – Component 4[5]

Item	Question Number	Load[6]
1	**Q38:** Having patients return for additional visits to see different specialists is better than having a one-stop shop because they get the best patient care possible	0.831
2	**Q27:** It is better to monitor each condition a patient has as a separate entity using appropriately trained specialists rather than trying to have one person who deals with everything	0.709
3	**Q39:** It is bad clinical practice for one GP to meet all the health care needs of a patient	0.635
4	**Q11:** The problem with specialising is that you deal with a narrow spectrum of conditions which means your skills in other areas do not develop	r0.398

The theme for component 4 (see table 18) appears to focus predominantly on the benefits of specialising. For ease of discussion component 4 will therefore be referred to as "benefits of specialising".

Table 19: Pattern matrix – Component 5[5]

Item	Question Number	Load[6]
1	**Q13:** It is acceptable for GPs to endorse a nurse's / pharmacist's prescribing decision by signing the prescription without personally assessing the patient	r0.738
2	**Q35:** You should only accept responsibility for signing an acute prescription if you have personally assessed the patient	0.656
3	**Q26:** Non medical prescribers save GPs' time	r0.433
4	**Q7:** Non medical prescribers save patients' time because they are able to see a health care professional sooner	r0.397
5	**Q17:** Nurses and doctors have overlapping skills that make it possible for one to substitute for the other in these areas	r0.388

Finally, the theme for component 5 (see table 19) appears to focus predominantly on individual clinical responsibility. For ease of discussion component 5 will therefore be referred to as "clinical responsibility".

To complete the final assessment of factors to be included it was necessary to return to SPSS and "force" a factor solution (i.e. a forced five component solution).

From this we are interested in:

I. The component correlation matrix (which demonstrates the strength of relationship between the components. Low correlations show similar solutions from both the varimax and oblimin rotations, components with stronger correlations (i.e. above 0.3) result in

discrepancies between the two techniques and indicate oblimin rotation should be reported (Pallant, 2007))

II. The pattern matrix (which shows the loadings within each component – highest loadings explain the component's main thrust and are thus used for labelling purposes)
III. The structure matrix (indicating underlying relationships between questions and the component), and,
IV. The communalities (indicating how well a question fits within that component: low values (<0.3 (Pallant, 2007)) indicate the question does not fit particularly well within the component).

The five component solution explained 48.5% of the variance (compared with 57.8% with the seven component solution). The component correlation matrix, for the forced five component rotation, contained some high values (i.e. above 0.3, see I above) indicating components were strongly correlated and that a rotated solution using direct oblimin was appropriate.

The pattern matrix, indicating the statement with the highest loading for each component, revealed the main thrust for each component to be:

- Component 1 – (reverse) question 40: There is no need to provide routine chronic disease management evenings / weekends
- Component 2 – question 51: The time and energy spent obtaining QOF points is disproportionate to the patient benefits
- Component 3 – question 4: Providing continuity of care to an individual patient is more time efficient because you can figure out what is wrong with the patient more quickly
- Component 4 – question 38: Having patients return for additional visits to see different specialists is better than having a one-stop shop because they get the best patient care possible

- Component 5 – (reverse) question 13: It is acceptable for GPs to endorse a nurse's / pharmacist's prescribing decision by signing the prescription without personally assessing the patient

The structure matrix, indicating underlying relationships between questions and the component, is detailed in table 20 below.

Table 20: Structure matrix (all 5 components)

	Component				
Question number	**1**	**2**	**3**	**4**	**5**
Q40: There is no need to provide routine chronic disease management evenings / weekends	-0.774				
Q20: We should provide routine chronic disease clinics evenings and weekends even if it means establishing a rota of nurses to run them	0.717				
Q1: Increasing surgery hours to include more evenings and weekends will not improve the overall health of the nation	-0.599				
Q26: Non medical prescribers save GPs' time	0.568				-0.505
Q46: Friday to Monday is a long time for the general public to go without access to routine (not emergency) health care	0.535			0.364	
Q30: Non medically qualified prescribers are safer prescribers than doctors because they follow protocols better	0.488		0.342	0.330	
Q49: The benefits of economies of scale, through practice mergers, outweigh any loss to continuity of care	0.456			0.307	
Q43: QOF is a good thing because it drives good patient-focused clinical care		-0.719			
Q51: The time and energy spent obtaining QOF points is disproportionate to the patient benefits		0.716			
Q12: QOF is a good use of my time because by reviewing lists of patients I may identify someone who has "slipped through the net"		-0.712			
Q45: I like the structure that QOF provides because it is satisfying to know I have done everything I should for that patient		-0.706			
Q25: QOF targets mean it is hard to focus on the patient's reason for coming to see you		0.641	0.355		

Continued overleaf....

Question number	Component				
	1	2	3	4	5
Q36: I see QOF as guideline only and it does not constrain me as a health care professional		-0.521			
Q34: One of the liberating aspects of recent changes in general practice is that you can specialise in an area that interests you	0.406	-0.449		0.398	
Q4: Providing continuity of care to an individual patient is more time efficient because you can figure out what is wrong with the patient more quickly			0.676		
Q5: The beauty of general practice is that you are a generalist. You don't have to specialise	-0.347		0.640	-0.314	
Q38: Having patients return for additional visits to see different specialists is better than having a one-stop shop because they get the best patient care possible				0.773	
Q27: It is better to monitor each condition a patient has as a separate entity using appropriately trained specialists rather than trying to have one person who deals with everything				0.711	
Q39: It is bad clinical practice for one GP to meet all the health care needs of a patient				0.630	
Q11: The problem with specialising is that you deal with a narrow spectrum of conditions which means your skills in other areas do not develop			0.424	-0.432	
Q31: Routine health monitoring, irrespective of the presenting condition, is important to the overall well-being and health of the patient	0.375	-0.373		0.426	-0.311
Q13: It is acceptable for GPs to endorse a nurse's / pharmacist's prescribing decision by signing the prescription without personally assessing the patient					-0.726
Q35: You should only accept responsibility for signing an acute prescription if you have personally assessed the patient					0.590
Q7: Non medical prescribers save patients' time because they are able to see a health care professional sooner	0.437		0.363		-0.475
Q17: Nurses and doctors have overlapping skills that make it possible for one to substitute for the other in these areas	0.364	-0.347			-0.455

The communalities, from the “forced” five component solution, indicated no low values (i.e. values <0.3) suggesting all questions did fit within the components.

6.3.3.3.4 Summary from Factor Analysis

The 25 variables were subjected to Principal Component Analysis (PCA) using SPSS Version 14. Prior to performing PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of coefficients of 0.3 and above. The Keiser-Meyer-Olkin value was 0.793, exceeding the minimum recommended value of 0.6 (Kaiser 1970, 1974) and Bartlett’s Test of Sphericity (Bartlett 1954) reached statistical significance (i.e. <0.05), supporting the factorability of the correlation matrix.

PCA revealed the presence of seven components with eigenvalues exceeding 1, explaining 21.0%, 8.4%, 7.6%, 6.0%, 5.6%. 5.0% and 4.3% of the variance respectively (total variance explained by the seven component solution is 57.9%). An inspection of the screeplot revealed drops after the first, third and seventh components. Using Catell’s (1966) scree test, it was decided to retain all seven components for further investigation. However, results of Parallel Analysis showed only five components with eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (25 variables x 306 respondents), suggesting the sixth and seventh components could have been generated randomly. It was therefore decided to retain only five components.

To aid in the interpretation of these five components, oblimin rotation was performed. The rotated solution revealed all five components with a number of variables with strong loadings (values > 0.4). The pattern matrix and structure matrix for PCA with oblimin “forced” five-component rotation further supported the decision to retain five components.

6.3.3.4 Cronbach's Alpha

The statements comprising each component were assessed for their reliability (i.e. the degree to which each question supported the underlying theme) using Cronbach's Alpha.

Cronbach's Alpha checks internal consistency across questions and how free a component is from random error. It tests the underlying concept for how well questions fit together (Bland & Altman, 1997). Values range from 0 to 1 with higher values indicating greater reliability i.e. all questions are clustered together. Very low Cronbach's Alpha values may indicate that not all statements belong within the component. Authors vary on what level is acceptable. Some texts suggest values above 0.7 are acceptable but values above 0.8 preferable (Pallant, 2007) and some that 0.6 to 0.7 are at the lower end of acceptability (Hair et al, 1998). The lower the level the lower the internal consistency, therefore components with lower Cronbach's Alpha should have results interpreted with caution.

Prior to assessing the reliability it was necessary to reverse all negatively correlated items. Such items were identified from within the pattern matrix (see tables 15 to 19 previously) and were annotated with an "r". All questions loading negatively within a component are detailed in appendix 2.12.

Having performed the reliability analysis the following were then inspected to ensure complete reliability of the five underlying themes and the questions within them:

I. Case processing summary tables: to ensure the number of cases (respondents) was correct.
II. Reliability statistics table: to ensure the number of items (questions) was also correct.
III. Inter-item correlation matrix: to check for negative values (if negatively correlated items have been reversed correctly all values

should be positive, therefore showing items are measuring the same underlying theme in the same direction).

IV. Item-total statistics table: to ensure the corrected-item total correlation values are also positive (for the same reasons as the inter-item correlation matrix). This value also indicates the degree to which individual items contribute to the component. Values less then 0.3 indicate that the item is measuring something other than the underlying theme – such values need to be removed if the overall Cronbach's Alpha is low.

V. Reliability statistics table: for the Cronbach's Alpha value, and finally, the

VI. "Alpha if item deleted" column (within the "item-total statistics table") is inspected. This gives a new Cronbach's Alpha value if that question is removed from the component.

Results for each of the identified five components are presented in the following five sections (6.2.3.4.1 through to 6.2.3.4.5).

6.3.3.4.1 Component 1: Weekend Working

Work, detailed above, suggested that the underlying theme to component 1 was weekend working (with a subsidiary theme that considered the work of NMPs). It also suggested that, up to, eight questions were contributing to this component (see table 15). The results from the reliability analysis for this component are detailed below in table 21.

Table 21: Results from the reliability analysis for weekend working

Reliability analysis table	**Section / inspection**	**Result**	**Outcome**
Case processing summary table	Total number of cases	306	Correct
Reliability statistics table	Number (N) of items	8	Correct
Inter-item correlation matrix	Negative values	None	Negatively correlated items have been reversed correctly
Item-total statistics table	Negative values	None	Negatively correlated items have been reversed correctly
	Values <0.3	None	All items contribute to the component
Reliability statistics table	Cronbach's Alpha value	0.746	Good consistency amongst questions
Item-total statistics table	Cronbach's Alpha if item deleted	Range: 0.690 to 0.733	No questions to delete from component

All eight items within the underlying theme of “weekend working” do fit reliably within the underlying construct. The final outcome for component 1: weekend working is therefore summarised in table 22 below:

Table 22: Final construct, after factor analysis and reliability testing, for the underlying theme known as “weekend working”

Question number	Contribution	Question
Q40	r0.796	There is no need to provide routine chronic disease management evenings / weekends
Q20	0.735	We should provide routine chronic disease clinics evenings and weekends even if it means establishing a rota of nurses to run them
Q1	r0.606	Increasing surgery hours to include more evenings and weekends will not improve the overall health of the nation
Q26	0.502	Non medical prescribers save GPs’ time
Q46	0.476	Friday to Monday is a long time for the general public to go without access to routine (not emergency) health care
Q30	0.431	Non medically qualified prescribers are safer prescribers than doctors because they follow protocols better
Q49	0.378	The benefits of economies of scale, through practice mergers, outweigh any loss to continuity of care
Q7	0.338	Non medical prescribers save patients’ time because they are able to see a health care professional sooner

The final underlying theme for component 1 is around the extension of routine chronic disease management, utilising the skills of non medical prescribers, to include more evening and weekend clinics.

Professionals who weighted heavily on this theme felt that there was a need for chronic disease management during the “out of hours” (OOH) period and that this would improve the overall health of the nation. They generally supported the role of the NMP in providing such services, and, to a lesser extent, felt that another way to maintain services could be through practice mergers thereby providing economies of scale.

6.3.3.4.2 Component 2: QOF

The underlying theme to component 2 appeared to be the QOF. It also suggested that, up to, seven questions were contributing to this component (see table 16). The results from the reliability analysis for this component are detailed below in table 23.

Table 23: Results from the reliability analysis for QOF

Reliability analysis table	**Section / inspection**	**Result**	**Outcome**
Case processing summary table	Total number of cases	306	Correct
Reliability statistics table	Number (N) of items	7	Correct
Inter-item correlation matrix	Negative values	Some negative values	Negatively correlated items may not fit within the construct
Item-total statistics table	Negative values	None	Negatively correlated items have been reversed correctly
	Values <0.3	Range 0.013 – 0.176	All items scored less than 0.3
Reliability statistics table	Cronbach's Alpha value	0.097	Very poor correlation amongst items
Item-total statistics table	Cronbach's Alpha if item deleted	Low across all values	Items do not reliably sit well together

As all items scored low it was necessary to systematically work through, using trial and error, various combinations of the seven questions. Individual questions were removed (and sometimes added back in) and

the impact on the Cronbach's Alpha value and other values under inspection was assessed to realise the best possible combination. In doing this it was decided to remove questions 25, 51 and r36 thus leaving questions r43, r12, r45 and r34. Analysis of the reliability between the final questions revealed a Cronbach's Alpha value of 0.729, demonstrating good correlation between the four remaining questions. The final construct of component 2 (QOF) is detailed in table 24 below.

Table 24: Final construct, after factor analysis and reliability testing, for the underlying theme known as "QOF"

Question number	Contribution	Question
Q43	r0.715	QOF is a good thing because it drives good patient-focused clinical care
Q12	r0.713	QOF is a good use of my time because by reviewing lists of patients I may identify someone who has "slipped through the net"
Q45	r0.690	I like the structure that QOF provides because it is satisfying to know I have done everything I should for that patient
Q34	r0.326	One of the liberating aspects of recent changes in general practice is that you can specialise in an area that interests you

The underlying theme for component 2 is the value, or not, of the Quality Outcomes Framework (QOF) in providing structure to reviewing patients. Professionals who weighted heavily on this component did not believe QOF focused on the patient or drove up the quality of patient care. To a lesser extent they were also less likely to be in support of specialising in a specific clinical area(s).

6.3.3.4.3 Component 3: Benefits of Generalism

The underlying theme to component 3 was continuity of care and the benefits of being a generalist rather than specialising (with a subsidiary theme that considered the work of NMPs). It also suggested that, up to, five questions were contributing to this component (see table 17). The results from the reliability analysis for this component are detailed below in table 25.

Table 25: Results from the reliability analysis for component 3

Reliability analysis table	**Section / inspection**	**Result**	**Outcome**
Case processing summary table	Total number of cases	306	Correct
Reliability statistics table	Number (N) of items	5	Correct
Inter-item correlation matrix	Negative values	None	Negatively correlated items have been reversed correctly
Item-total statistics table	Negative values	None	Negatively correlated items have been reversed correctly
	Values <0.3	Range 0.106 – 0.254	All items scored less than 0.3
Reliability statistics table	Cronbach's Alpha value	0.359	Poor correlation amongst items
Item-total statistics table	Cronbach's Alpha if item deleted	Low across all values	0.369 if remove Q30; then, 0.571 if remove Q7

As there was poor correlation amongst the 5 items it was necessary to work through the dataset removing questions based upon the results of

the “Cronbach’s Alpha if item deleted” value. It was decided to remove questions 30 and 7, thus leaving questions 4, 5 and 11. Analysis of the reliability between these three questions revealed a Cronbach’s Alpha of 0.571. This was the highest level of reliability that was obtainable and therefore this result should be interpreted with caution as the internal consistency is not at the acceptable level of, at least, 0.6 / 0.7 (Hair et al., 1998). The final construct of component 3 is detailed in table 26 below.

Table 26: Final construct, after factor analysis and reliability testing, for the underlying theme known as “Benefits of Generalism”

Question number	Contribution	Question
Q4	0.682	Providing continuity of care to an individual patient is more time efficient because you can figure out what is wrong with the patient more quickly
Q5	0.638	The beauty of general practice is that you are a generalist. You don’t have to specialise
Q11	0.402	The problem with specialising is that you deal with a narrow spectrum of conditions which means your skills in other areas do not develop

The underlying theme for component 3 is the value of continuity of care and a generalist approach. Professionals who were in favour of continuity of care were also in favour of the generalist approach, they were also less likely to be in support of specialising in a specific clinical area(s).

6.3.3.4.4 Component 4: Benefits of Specialising

The underlying theme to component 4 was the improvement in patient care associated with an increase in expertise through specialising. It also suggested that, up to, four questions were contributing to this component (see table 18). The results from the reliability analysis for component 4 are detailed below in table 27.

Table 27: Results from the reliability analysis for component 4

Reliability analysis table	**Section / inspection**	**Result**	**Outcome**
Case processing summary table	Total number of cases	306	Correct
Reliability statistics table	Number (N) of items	4	Correct
Inter-item correlation matrix	Negative values	None	Negatively correlated items have been reversed correctly
Item-total statistics table	Negative values	None	Negatively correlated items have been reversed correctly
	Values <0.3	Range 0.275 (Q r11) to 0.498	r11 does not fit well within the component
Reliability statistics table	Cronbach's Alpha value	0.605	Acceptable correlation amongst items
Item-total statistics table	Cronbach's Alpha if item deleted	0.617 if remove r11	Remove r11

As there was poor correlation with item r11 it was considered necessary to remove this question (based upon the (item-total statistics table)). Analysis of the reliability between the remaining questions (Q38, Q27 and Q39) revealed a Cronbach's Alpha value of 0.617, demonstrating acceptable correlation between these three questions. The final construct of component 4 is detailed in table 28 below.

Table 28: Final construct, after factor analysis and reliability testing, for the underlying theme known as "Benefits of Specialising"

Question number	Contribution	Question
Q38	0.831	Having patients return for additional visits to see different specialists is better than having a one-stop shop because they get the best patient care possible
Q27	0.709	It is better to monitor each condition a patient has as a separate entity using appropriately trained specialists rather than trying to have one person who deals with everything
Q39	0.635	It is bad clinical practice for one GP to meet all the health care needs of a patient

The underlying theme for component 4 is quality of care in terms of monitoring conditions individually, by someone with a specialist interest, rather than considering the patient's overall health encompassing all conditions they may have.

6.3.3.4.4 Component 5: Clinical Responsibility

Finally, the underlying theme to component 5 was clinical responsibility. It also suggested that, up to, five questions were contributing to this component (see table 19). The results from the reliability analysis for this component are detailed below in table 29.

Table 29: Results from the reliability analysis for component 5

Reliability analysis table	**Section / inspection**	**Result**	**Outcome**
Case processing summary table	Total number of cases	306	Correct
Reliability statistics table	Number (N) of items	5	Correct
Inter-item correlation matrix	Negative values	Some negative values	Negatively correlated items may not fit within the construct
Item-total statistics table	Negative values	None	Negatively correlated items have been reversed correctly
	Values <0.3	Range 0.013 – 0.124	All items scored less than 0.3
Reliability statistics table	Cronbach's Alpha value	0.071	Poor correlation amongst items
Item-total statistics table	Cronbach's Alpha if item deleted	0.151 if remove -26, then 0.370 if remove -7, then 0.555 if remove -17	Remove -26, -7 and -17

As there was poor correlation amongst the items it was necessary to systematically work through the dataset removing questions based upon the “Cronbach’s Alpha if item deleted” value. In doing this it was decided to remove questions r26, r7 and r17, thus leaving questions r13 and 35. Analysis of the reliability between the remaining two questions revealed a Cronbach’s Alpha value of 0.555. This was the highest level of reliability that was obtainable and therefore this result should be interpreted with caution as the internal consistency is not at the acceptable level of, at least, 0.6 / 0.7. The final construct of component 5 is detailed in table 30 below.

Table 30: Final construct, after factor analysis and reliability testing, for the underlying theme known as “Clinical Responsibility”

Question number	Contribution	Question
Q13	-0.738	It is acceptable for GPs to endorse a nurse’s / pharmacist’s prescribing decision by signing the prescription without personally assessing the patient
Q35	0.656	You should only accept responsibility for signing an acute prescription if you have personally assessed the patient

The underlying theme for component 5 was clinical responsibility. Professionals who weighted heavily on this theme thought all individual prescribers should accept responsibility for their own prescribing.

This section has outlined the themes for the final five components, the questions that contribute to each component (including the relative degree to which each question contributes to the component) and how reliable the internal consistency between these questions are. The next sections will consider differences between responses to each of the components with respect to demographics (such as age, gender and professional group).

6.3.3.5 Summative values

Having decided upon the number of components, and questions within each component, SPSS was then utilised to calculate the summative

values for each respondent for the five individual components. Thereby creating five new variables each one reflecting an individual component:

I. Weekend working
II. QOF
III. Benefits of generalism
IV. Benefits of specialising
V. Clinical responsibility

The Mann-Whitney U-test (see section 6.2.3.6) was then used to compare responses to the new variables between the following groups:

1. GPs versus “other” health care professionals (i.e. non-GPs)
2. Responses of males versus females
3. Respondents 50 years of age and above and those below 50 years of age (the age bands were selected based upon approximate equal distribution into 2 segments)
4. Responses of part-time respondents versus those of full-time respondents
5. Responses of qualified prescribers (both GPs and NMPs) versus professionals that were not qualified to prescribe (i.e. nurses and pharmacists without the NMP qualification)

The Kruskal-Wallis H-test (see section 6.2.3.6.6) was used to compare responses to the new variables between the following groups:

1. GPs versus nurses versus pharmacists
2. Responses of respondents in the following age bands (the age bands were selected based upon approximate equal distribution into 3 segments)
    a. 44 years of age or below
    b. 45 to 52 years of age
    c. 53 years of age or older
3. GPs versus NMPs (both nurses and pharmacists) versus non-prescribers (both nurses and pharmacists)

6.3.3.6 Mann-Whitney U-test and Kruskal-Wallis H-test

The Mann-Whitney U-test tests for differences between two independent variables and the Kruskal-Wallis H-test tests for differences between three (or more) independent variables. Both tests were applied to each component construct (please refer to section 6.2.3.4) at the 5% significance level ($p<0.05$). However, undertaking several different comparisons increases the risk of generating a significant result when, in reality, this could have occurred by chance (simply due to the number of comparisons undertaken). It was therefore considered necessary to apply a Bonferroni adjustment (Pallant, 2007; Bland & Altman, 1995) to the alpha (significance) level. The Bonferroni adjustment is calculated by dividing the alpha level (0.05) by the number of comparisons undertaken (in this case eight: as five Mann-Whitney U-test comparisons plus three Kruskal-Wallis H-test comparisons were undertaken). The actual significance level was therefore taken to be 0.05/8 (i.e. 0.00625).

When considering the Mann-Whitney U-test the main pieces of information required are:

- The Z-approximation value (as this is used to calculate an approximate effect size), and,
- The significance level (given as Asymp. Sig (2-tailed) – if significant this value should be less than the alpha value (0.05 with any Bonferonni adjustments considered necessary i.e. in this case less than 0.00625)).

The effect size is known as r. An approximate effect size (r) can be calculated by dividing the Z-approximation value (generated by SPSS) by the square root of N (where N = the total number of cases). Using Cohen (1988) criteria: 0.1 represents a small effect, 0.3 represents a medium effect and 0.5 represents a large effect.

To consider the direction of the difference the mean rank was considered in conjunction with the median value for each group. From the Likert

scale, on the original questionnaire, it should be remembered that low values (1 and 2) were used for agreement with the statement and higher values (4 and 5) were used for disagreement.

For the Kruskal-Wallis H-test the main pieces of information required are:

- The chi-square value
- The degrees of freedom (df)
- The significance level (presented as Asymp. Sig.) – if this value is less than the alpha value (0.05 with any Bonferonni adjustments considered necessary i.e. in this case less than 0.00625) there is a statistically significant difference across the 3 groups, and,
- The mean rank, indicating which of the 3 groups has the highest overall ranking.

To find out which of the groups are significantly different from one another it was then necessary to undertake a Mann-Whitney U-test between pairs of groups (i.e. group 1 with group 2, group 1 with group 3, and, group 2 with group 3). Results from each of the above analyses are presented in the following sections.

6.3.3.6.1 Five components versus qualified as GP or not

The Mann-Whitney U-test revealed a statistically significant difference ($p<0.00625$), between the responses of GPs compared with the responses of “other” HCPs, across all five components. There was a large effect size in components 1 (weekend working) and 4 (benefits of specialising), a medium effect size in components 2 (QOF) and 3 (benefits of generalism) and a small effect size in component 5 (clinical responsibility).

The median score and mean rank indicated that GPs were less likely to consider the provision of chronic disease management (CDM) clinics evenings and weekends was either a good idea or likely to improve the overall health of the nation. They were also less in favour of using NMPs (component 1). GPs were less likely to see the value of QOF (component

2), the benefits of specialising (component 4) and were less likely to consider that clinical responsibility relied on seeing the patient (component 5). GPs were however more likely, than nurses / pharmacists, to see the benefits of generalism and time efficiencies of providing continuity of care (component 3). All of the results are presented below in table 31.

Table 31: Difference between GPs and "other" Health Care Professionals (HCPs) for each of the five components[8].

	Compon. 1	**Compon. 2**	**Compon. 3**	**Compon. 4**	**Compon. 5**
Mann-Whitney U	2738	6335	6061	4643	8531
Significance level	0.00000	0.00000	0.00000	0.00000	0.00136
Z-approximation	-10.43	-5.83	-6.72	-8.30	-3.20
Number (N)	287	294	300	295	298
Effect (r = z/√N)	-0.62	-0.34	-0.39	-0.48	-0.19
Effect size	Large	Medium	Medium	Large	Small
Median (Md) GPs	31	12	6	12	7
Median (Md) HCPs	25	10	8	9	6
Mean Rank GPs	186	172	122	183	163
Mean Rank HCPs	82	113	189	100	131

6.2.3.6.2 Five components versus gender responses

The Mann-Whitney U-test revealed a statistically significant difference ($p<0.00625$), between the responses of males compared with the responses of females, in components 1 (weekend working), 3 (benefits of generalism) and 4 (benefits of specialising) only. The differences in responses, between males and females, was not statistically significant for components 2 (QOF) ($p = 0.00797$) and 5 (clinical responsibility) ($p = 0.15945$). There was a medium effect size in components 1 (weekend working) and 4 (benefits of specialising) and a small effect size in component 3 (benefits of generalism).

The median score and mean rank indicated that males were less likely to consider the provision of chronic disease management (CDM) clinics

[8] Lower values for median and mean rank scores indicate agreement with the statement, with higher values indicating disagreement.

evenings and weekends was either a good idea or likely to improve the overall health of the nation, they were less in favour, than females, of using NMPs (component 1). Male respondents were also less likely to see the benefits of specialising (component 4). They were, however, more likely, than female respondents, to see the benefits of generalism and time efficiencies of providing continuity of care (component 3).

Although the results indicate that males were less in favour of weekend working and the use of NMPs, almost all the males were GPs which almost certainly accounted for this result. It is possible that responses in this section are more reflective of a GP effect than necessarily a male effect. More analysis in this area could be undertaken, however, time did not permit this within the scope of this study. All of the results are presented below in table 32 below.

Table 32: Differences between Male and Female respondents for each of the five components[8].

	Compon. 1	**Compon. 2**	**Compon. 3**	**Compon. 4**	**Compon. 5**
Mann-Whitney U	4652	7420	6831	5869	8285
Significance level (p)	0.00000	0.00797	0.00020	0.00000	0.15945
Z-approximation	-6.23	-2.65	-3.72	-4.95	-1.41
Number (N)	280	287	291	288	291
Effect (r = z/√N)	-0.37	-0.16	-0.22	-0.29	-0.08
Effect size	Medium	Small	Small	Medium	Small
Median (Md) Males	31	12	6	12	7
Median Females	27	11	7	10	6
Mean Rank Males	184	162	120	179	156
Mean Rank Females	120	135	159	128	141

6.3.3.6.3 Five components versus age: 50 years and over ("old") and under 50 years of age ("young")

The Mann-Whitney U-test revealed no statistically significant difference ($p<0.00625$), between the responses of those aged 50 years and older with respondents under 50 years of age, in any of the 5 components (range for $p = 0.47489 – 0.85520$). These results will be discussed no further but a summary is presented in table 33 overleaf.

Table 33: Differences between respondents aged 50 years and over ("old") and respondents under 50 years ("young") for each of the five components[8]

	Compon. 1	Compon. 2	Compon. 3	Compon. 4	Compon. 5
Mann-Whitney U	10162	10381	10933	10711	10572
Significance level (p)	0.85520	0.56535	0.67408	0.82802	0.47489
Z-approximation	-0.18	-0.57	-0.42	-0.22	-0.71
Number (N)	287	294	300	295	298
Effect (r = z/√N)	-0.01	-0.03	-0.02	-0.01	-0.04
Effect size	Nil	Nil	Nil	Nil	Nil
Median (Md) Young	28	11	7	10.5	6
Median (Md) Old	28.5	11	7	11	6
Mean Rank Young	143	145	153	149	153
Mean Rank Old	145	150	148	147	146

6.3.3.6.4 Five components versus employment status

The Mann-Whitney U-test revealed a statistically significant difference ($p<0.00625$), between the responses of full-time employees compared with the responses of part-time employees in components 1 (weekend working), 3 (benefits of generalism) and 4 (benefits of specialising). The differences in responses, between full-time and part-time employees, was not statistically significant for components 2 (QOF) ($p = 0.02047$) and 5 (clinical responsibility) ($p = 0.90145$). There was a medium effect size in components 1 (weekend working) and 4 (benefits of specialising) and a small effect size in components 3 (benefits of generalism).

The median score and mean rank indicated that the full-time respondents were less likely to be in favour of extending CDM clinics to cover evenings and weekends and were less likely to support the use of NMPs. They were also less likely to agree with specialising (component 4) and more likely to support continuity of care and the maintenance of the generalist role (component 3). All of the results are presented overleaf in table 34.

Table 34: Differences between full-time and part-time respondents for each of the five components[8]

	Compon. 1	Compon. 2	Compon. 3	Compon. 4	Compon. 5
Mann-Whitney U	6522	8537	7781	6489	10282
Significance level (p)	0.00000	0.02047	0.00016	0.00000	0.90145
Z-approximation	-4.69	-2.32	-3.78	-5.33	-0.12
Number (N)	279	286	291	287	290
Effect (r = z/√N)	-0.28	-0.14	-0.22	-0.31	-0.01
Effect size	Medium	Small	Small	Medium	Nil
Median (Md) F/T	30	12	6	11.5	7
Median (Md) P/T	27	11	7	10	6
Mean Rank F/T	165	156	125	173	146
Mean Rank P/T	119	133	162	121	145

6.3.3.6.5 Five components versus prescribing status (qualified prescribers (both GPs and NMPs) or not)

The Mann-Whitney U-test revealed a statistically significant difference ($p<0.00625$), between prescribers and non-prescribers, for components 1 (weekend working), 2 (QOF), 3 (benefits of generalism) and 4 (benefits of specialising). The differences in responses between the two groups did not reach statistical significance for component 5 (clinical responsibility) ($p = 0.62028$). There was a large effect size in component 4 (benefits of specialising), a medium effect size in components 1 (weekend working) and 3 (benefits of generalising) and a small effect size in component 2 (QOF).

The median score and mean rank indicated that the prescribers were less likely to be in favour of extending CDM clinics to cover evenings and weekends and were less likely to support the use of NMPs. They were also less likely to agree with specialising (component 4) and more likely to support continuity of care and the maintenance of the generalist role (component 3). Qualified prescribers were less likely to see the value of QOF (component 2).

Although the results show that prescribers were less in favour of weekend working and the use of NMPs almost all the prescribers were

GPs which almost certainly accounted for this result. It is likely that the results above are more representative of a GP effect than that of all prescribers. More analysis in this area could be undertaken, however, time did not permit this within the scope of this study. All of the results are presented below in table 35.

Table 35: Differences between Prescribers[9] and Non-Prescribers[10] for each of the five components.

	Compon. 1	**Compon. 2**	**Compon. 3**	**Compon. 4**	**Compon. 5**
Mann-Whitney U	2927	4998	4717	2685	7360
Significance level (p)	0.00000	0.00014	0.00000	0.00000	0.62028
Z-approximation	-6.64	-3.82	-5.04	-8.16	-0.50
Number (N)	267	275	279	276	279
Effect (r = z/√N)	-0.41	-0.23	-0.30	-0.49	-0.03
Effect size	Medium	Small	Medium	Large	Nil
Median (Md) Prescribers	30	12	6	11	6
Median (Md) Non-Prescribers	25	10	8	8	6
Mean Rank Prescribers	152	149	125	162	141
Mean Rank Non-Prescribers	78	107	179	74	136

6.3.3.6.6 Five components versus professional group (GPs, Pharmacists and Nurses)

The Kruskal-Wallis H-test, comparing responses of each of the three professional groups (GPs, pharmacists and nurses), revealed a statistically significant difference ($p<0.00625$) across all five components. GPs recorded the highest median scores on components 1 (weekend working), 2 (QOF), 4 (benefits of specialising) and 5 (clinical responsibility) and the lowest median score on component 3 (benefits of generalism). These results suggest GPs are less in favour, compared with the other two professional groups, of the extension of CDM clinics to cover weekend working and evenings (component 1). They are also less in favour of the use of NMPs, less likely to see the benefits of QOF

[9] GPs and NMPs (both Pharmacists and Nurses qualified as NMPs)

[10] Pharmacists and Nurses without the NMP qualification

(component 2), less likely to agree with specialising (component 4) but more likely to support continuity of care and the maintenance of the generalist role (component 3). GPs are also less likely to agree with the need to personally assess an individual prior to issuing a prescription (clinical responsibility – component 5).

The pharmacists scored lowest on component 1 (suggesting they are more likely to agree, than either of the other two professional groups, with the need for CDM clinics evenings and weekends). The nurses scored lowest on component 4 (benefits of specialising) suggesting they are more likely, than either GPs or pharmacists, to agree with patients returning for additional visits to see a professional who specialises in their condition, rather than relying on a single professional to address their whole needs. Nurses and pharmacists had equal median scores for components 2 (benefits of QOF), 3 (benefits of generalism) and 5 (clinical responsibility) – these were lower than the GPs score suggesting they were more likely, than GPs, to agree with the underlying themes within these three components. The results of the analysis are presented in table 36 below.

Table 36: Difference between each of the three professional groups (GPs, pharmacists and nurses) for each of the 5 components (C1 – C5)

	C1	C2	C3	C4	C5
Asymp. Sig. (p)	0.0000	0.0000	0.0000	0.0000	0.0051
Chi-Square	112.69	34.29	45.29	70.43	10.54
df	2	2	2	2	2
GPs (N)	171	172	172	172	172
GPs (Median)	31	12	6	12	7
Nurses (N)	88	95	98	94	96
Nurses (Median)	25.5	10	8	9	6
Pharmacists (N)	28	27	30	29	30
Pharmacists (Median)	21.5	10	8	10	6

A Mann-Whitney U-test was then performed comparing each of the groups (for all components) to establish which groups were statistically significantly different. The results are presented in the sub-section overleaf (6.3.3.6.6.1).

6.3.3.6.6.1 Mann-Whitney U-test comparing GPs (group 1), nurses (group 2) and pharmacists (group 3) for each of the 5 components

The Mann-Whitney U-test revealed a statistically significant difference between GPs (group 1) and nurses (group 2) in components 1 (weekend working), 2 (QOF), 3 (benefits of generalism) and 4 (benefits of specialising). The difference between GP responses and those of nurses was not statistically significant for component 5 (clinical responsibility) ($p = 0.007$).

There was also a statistically significant difference between GPs (group 1) and pharmacists (group 3) for components 1 (weekend working), 2 (QOF), 3 (benefits of generalism) and 4 (benefits of specialising). The difference between GP responses and those of pharmacists was not statistically significant for component 5 (clinical responsibility) ($p = 0.016$).

The findings showed that when considering differences between nurses (group 2) and pharmacists (group 3) there was a statistically significant difference in component 1 (weekend working) only.

Due to time constraints only tests which demonstrate a statistically significant difference between groups will be discussed further. Considering the effect size (by applying Cohen (1988) criteria[11]) between each of the professional groups (see table 37 for summary)):

- There was a large effect size between GPs and both nurses (0.6) and pharmacists (0.5) for component 1 (weekend working);
- A medium effect size between GPs and both nurses (0.3) and pharmacists (0.3) for component 2 (QOF);
- A medium-large effect size in differences between GPs and nurses (0.4) and a medium effect size difference between GPs and pharmacists (0.3) for component 3 (benefits of generalising);

[11] Cohen (1988) criteria: 0.1 represents a small effect, 0.3 represents a medium effect and 0.5 represents a large effect.

- Component 4 (benefits of specialising) indicated a large effect size between GPs and nurses (0.5) but only a medium effect size between GPs and pharmacists (0.3).
- The effect size for component 1 (weekend working) between nurses and pharmacists was medium (0.3).

These results are summarised in table 37 below.

Table 37: Summary of the effect size differences in responses between each of the three professional groups for the 5 components (C1 – C5)[12]

Component 1:	**Weekend working**		
	GPs	Nurses	Pharmacists
GPs		Large (0.6)	Large (0.5)
Nurses	Large (0.6)		Medium (0.3)
Pharmacists	Large (0.5)	Medium (0.3)	
Component 2:	**QOF**		
	GPs	Nurses	Pharmacists
GPs		Medium (0.3)	Medium (0.3)
Nurses	Medium (0.3)		N/A – no statistically significant difference
Pharmacists	Medium (0.3)	N/A – no statistically significant difference	
Component 3:	**Benefits of generalism**		
	GPs	Nurses	Pharmacists
GPs		Med./Lge (0.4)	Medium (0.3)
Nurses	Med./Lge (0.4)		N/A – no statistically significant difference
Pharmacists	Medium (0.3)	N/A – no statistically significant difference	
Component 4:	**Benefits of specialising**		
	GPs	Nurses	Pharmacists
GPs		Large (0.5)	Medium (0.3)
Nurses	Large (0.5)		N/A – no statistically significant difference
Pharmacists	Medium (0.3)	N/A – no statistically significant difference	

[12] Only differences between professional groups that demonstrated a statistically significant difference are outlined (note: none for component 5)

The mean ranks, between each of the three professional groups, indicate the following:

Component 1:

- There was a large, statistically significant, difference between the views of GPs with those of nurses on the subject of extending routine CDM clinics into the evening and weekends. The mean rank indicates that nurses are more likely to support weekend and evening working than their GP colleagues.
- There was a large, statistically significant, difference between the views of GPs with those of pharmacists on the subject of extending routine CDM clinics into the evening and weekends. The mean rank indicates that pharmacists are more likely to support weekend and evening working than their GP colleagues.
- There was a medium, statistically significant, difference between the views of nurses with those of pharmacists on the subject of extending routine CDM clinics into the evening and weekends. The mean rank indicates that pharmacists are more likely to support weekend and evening working than their nurse colleagues.

Component 2:

- There was a medium, statistically significant, difference between the views of GPs with those of nurses on the subject of the structure QOF provides and whether or not this contributes to benefits in the overall health of the nation. The mean rank indicates that nurses are more likely to support QOF, and the structure it provides in identifying patients whom might otherwise “slip through the net”, than their GP colleagues.
- There was a medium, statistically significant, difference between the views of GPs with those of pharmacists on the subject of the structure QOF provides and whether or not this contributes to benefits in the overall health of the nation. The mean rank indicates that pharmacists are more likely to support QOF, and the

structure it provides in identifying patients whom might otherwise "slip through the net", than their GP colleagues.

- The difference in responses between nurses and pharmacists on this subject was not statistically significant.

Component 3:

- There was a medium/large, statistically significant, difference between the views of GPs with those of nurses on the benefits of continuity of care and generalism. The mean rank indicates that GPs are more likely to support continuity of care and are also more likely to consider there to be increased patient benefits in adopting a generalist approach rather than specialising in a specific clinical area(s), than their nurse colleagues.
- There was a medium, statistically significant, difference between the views of GPs with those of pharmacists on the benefits of continuity of care and generalism. The mean rank indicates that GPs are more likely to support continuity of care and are also more likely to consider there to be increased patient benefits in adopting a generalist approach rather than specialising in a specific clinical area(s), than their pharmacist colleagues.
- The difference in responses between nurses and pharmacists on this subject was not statistically significant.

Component 4:

- There was a large, statistically significant, difference between the views of GPs with those of nurses on the benefits of specialising. The mean rank indicates that GPs are less likely to support the idea of specialising, and treating each clinical condition as a separate entity, than their nurse colleagues.
- There was a medium, statistically significant, difference between the views of GPs with those of pharmacists on the benefits of specialising. The mean rank indicates that GPs are less likely to

support the idea of specialising, and treating each clinical condition as a separate entity, than their pharmacist colleagues.

- The difference in responses between nurses and pharmacists on this subject was not statistically significant.

Component 5:

- There were no statistically significant differences between any of the three professional groups on the subject of clinical responsibility and the signing of prescriptions.

These results are summarised in table 38 overleaf:

Table 38: Summary of the mean ranks for each of the three professional groups for the 5 components (C1 – C5)[13]

Component 1: Weekend working	**The extension of routine CDM clinics to include evenings and weekends and the use of NMPs.**		
Mean rank - GPs	160.38	111.61	-
Mean rank - Nurses	70.97	-	64.30
Mean rank - Pharmacists	-	29.11	40.29
Comments	GPs more likely than nurses to disagree with w/e working.	GPs more likely than pharmacists to disagree with w/e working.	Nurses more likely than pharmacists to disagree with w/e working.
Component 2: QOF	**The value, or not, of the QOF in providing structure to reviewing patients.**		
Mean rank - GPs	151.74	106.43	-
Mean rank - Nurses	101.88	-	61.88
Mean rank - Pharmacists	-	59.06	60.15
Comments	Nurses more likely than GPs to feel QOF provides structure and drives good pt. focused care.	Pharmacists more likely than GPs to feel QOF provides structure and drives good pt. focused care.	Result was not statistically significant
Component 3: Benefits of generalism	**Continuity of care and the benefits of being a generalist rather than specialising.**		
Mean rank - GPs	114.28	93.96	-
Mean rank - Nurses	172.75	-	64.26
Mean rank - Pharmacists	-	144.72	65.30
Comments	GPs more likely than nurses to prefer continuity of care (COC) and value the benefits of generalism over specialism	GPs more likely than pharm. to prefer COC and value the benefits of generalism over specialism	Result was not statistically significant

[13] Lower mean ranks indicate the professional group is more likely to agree with the underlying construct of the theme.

Component 4: Benefits of specialising	**The improvement in patient care associated with an increase in expertise through specialising**		
Mean rank - GPs	161.45	107.56	-
Mean rank - Nurses	83.36	-	59.59
Mean rank - Pharmacists	-	62.09	69.83
Comments	Nurses more likely than GPs to consider specialising, and treating each condition as a separate entity.	Pharmacists more likely than GPs to consider specialising, and treating each condition as a separate entity.	Result was not statistically significant

The overall summary of the results from the analysis of the differences between each of the three professional groups (GPs, nurses and pharmacists) for each of the five components are presented in appendix 2.13.

6.3.3.6.7 Five components versus three age bands: 44 years and under, 45 – 52 years and 53 years and over

The Kruskal-Wallis H-test, comparing responses of each of the 3 age bands (44 years and under, 45 – 52 years and 53 years and over) did not reveal any statistically significant differences ($p < 0.00625$) in any of the five components. The results of the analysis are presented in table 39 below.

Table 39: Difference between each of the five components (C1 – C5) across three age bands (≤44 yr, 45 yr-52 yr, ≥53 yr)

	C1	**C2**	**C3**	**C4**	**C5**
Asymp. Sig. (p)	0.6466	0.4550	0.3772	0.6120	0.1669
Chi-Square	0.87	1.58	1.95	0.98	3.58
df	2	2	2	2	2
44 years & under (N)	85	87	89	88	89
44 years & under (Median)	28	11	7	10	7
45 - 52 years (N)	103	103	105	102	105
45 - 52 years (Median)	29	11	7	10	11
53 years & over (N)	99	104	106	105	104
53 years & over (Median)	28	12	6	6	6

No further analysis was thus performed on this data.

6.3.3.6.8 Five components versus professional group and prescribing status (i.e. GPs, NMPs and Non-prescribers)

The Kruskal-Wallis H-test, comparing responses of each of the three groups in terms of prescribing (i.e. GPs, non-medical prescribers (NMPs) (i.e. Nurses and Pharmacists who are qualified to prescribe) and non-prescribers (i.e. Nurses and Pharmacists who are not qualified to prescribe)) revealed a statistically significant difference ($p < 0.00625$) in components 4 (benefits of specialising, $p = 0.0016$) and 5 (clinical responsibility, $p = 0.0002$) only. GPs recorded the highest median scores on both components (i.e. GPs were more likely to disagree with the theme of these components). The non-prescribers scored lowest on component 4 and the NMPs scored lowest on component 5.

Interpretation of these results indicate that GPs would rather not see patients return for additional visits to see different specialists whereas non-prescribers would (the NMPs, as a group, were somewhere between the two). GPs tended to prefer the “one stop shop” method of patient care and preferred one person to deal with the whole patient, and all their conditions, rather than monitoring each condition as a separate entity. Of the three groups non-prescribers were least likely to favour this approach.

As a group, GPs were also more likely to indicate that a HCP did not need to personally assess a patient prior to signing an acute prescription, thereby accepting clinical responsibility, for that patient. Of the three groups the NMP were least likely to agree with this approach. The results of the analysis are presented in table 40 overleaf.

Table 40: Difference between each of the five components (C1 – C5) across professional group / prescribing status

	C1	C2	C3	C4	C5
Asymp. Sig. (p)	0.1019	0.4506	0.8729	0.0016	0.0002
Chi-Square	2.68	0.57	0.03	9.94	13.99
df	1	1	1	1	1
GPs (N)	170	172	171	171	171
GPs (Median)	31	12	6	12	7
NMPs (N)	33	33	32	32	33
NMPs (Median)	23	10	8	10	5
Non-Prescribers (N)	64	70	76	73	75
Non-Prescribers (Median)	25	10	8	8	6

A Mann-Whitney U-test was performed comparing each of the groups, using components 4 and 5 only, to establish which groups were statistically significantly different from the other groups. The results are presented in the sub-section below.

6.3.3.6.8.1 Mann-Whitney U-test comparing groups 1 (GPs), 2 (NMPs) and 3 (non-prescribers) for components 4 and 5

The Mann-Whitney U-test revealed a statistically significant difference ($p < 0.00625$) between the views of GPs (group 1) and NMPs (group 2) in components 4 (benefits of specialising) and 5 (clinical responsibility). Similarly there were also statistically significant differences between the views of NMPs (group 2) and non-prescribers (group 3) for both of these components. The differences in views between GP (group 1) and those of non-prescribers (group 3) was statistically significant for component 4 (benefits of specialising) but was not ($p = 0.094$) for component 5 (clinical responsibility).

Due to time constraints only tests which demonstrate a statistically significant difference between groups will be discussed further. Considering the effect size (by applying Cohen (1988) criteria[14]) between each of the professional groups (see table 41 for summary)):

[14] Cohen (1988) criteria: 0.1 represents a small effect, 0.3 represents a medium effect and 0.5 represents a large effect.

- There was a medium effect size (0.3) in differences between views of GPs and NMPs for component 4 (benefits of specialising).
- There was a large effect size (0.6) between the views of GPs and those of non-prescribers for this component.
- There was a medium effect size (0.3) when comparing responses of NMPs and non-prescribers for component 4.
- Component 5 (clinical responsibility) indicated a medium effect size (0.3) in differences between the views of GPs and NMPs.
- The differences between GPs and non-prescribers, for component 5, did not, however, reach statistical significance.
- There was a medium-large (0.4) effect size in differences between the views of NMPs and non-prescribers on clinical responsibility (component 5).

These results are summarised in table 41 overleaf.

Table 41: Summary of the effect size differences in responses between each of the three professional / prescribing groups for components 4 and 5[15]

Component 4:	**Benefits of specialising**		
	GPs	NMPs	Non-prescribers
GPs		Medium (0.3)	Large (0.6)
NMPs	Medium (0.3)		Medium (0.3)
Non-prescribers	Large (0.6)	Medium (0.3)	
Component 5:	**Clinical responsibility**		
	GPs	NMPs	Non-prescribers
GPs		Medium (0.3)	N/A – no statistically significant difference
NMPs	Medium (0.3)		medium-large (0.4)
Non-prescribers	N/A – no statistically significant difference	medium-large (0.4)	

The mean ranks, between each of the three professional / prescribing groups, indicated the following:

<u>Component 4:</u> Benefits of specialising

- There was a medium, statistically significant, difference between the views of GPs with those of NMPs on the benefits of specialising. The mean rank indicates that GPs are less likely to support the idea of specialising, and treating each clinical condition as a separate entity, than their NMP colleagues.
- There was a large, statistically significant, difference between the views of GPs with those of non-prescribers on the benefits of specialising. The mean rank indicates that GPs are less likely to support the idea of specialising, and treating each clinical condition as a separate entity, than their non-prescriber colleagues.

[15] Only differences between professional groups that demonstrated a statistically significant difference are outlined (note: none for component 5)

- There was a medium, statistically significant, difference between the views of NMPs with those of non-prescribers on the benefits of specialising. The mean rank indicates that NMPs are less likely to support the idea of specialising, and treating each clinical condition as a separate entity, than their non-prescribing colleagues.

Component 5: Clinical responsibility

- There was a medium, statistically significant, difference between the views of GPs with those of NMPs on personal clinical responsibility. The mean rank indicates that GPs are more likely to disagree with the need to personally assess a patient, prior to issuing an acute prescription to that patient, than their NMP colleagues.
- The differences in views between GPs and non-prescribers on the subject of clinical responsibility did not reach statistical significance.
- There was a medium - large, statistically significant, difference between the views of NMPs with those of non-prescribers on the subject of personal clinical responsibility. The mean rank indicates that non-prescribers are more likely to disagree with the need to personally assess a patient, prior to issuing an acute prescription to that patient, than their NMP colleagues.

These results are summarised in table 42 overleaf:

Table 42: Differences between GPs, Non-medical Prescribers (NMPs – Pharmacists and Nurses who prescribe) and Non-Prescribers (both Pharmacists and Nurses) for components 4 and 5

Component 4: Benefits of specialising	**The improvement in patient care associated with an increase in expertise through specialising**		
Mean rank: GPs	109.46	147.51	-
Mean rank: NMPs	62.13	-	66.98
Mean rank: Non-prescribers	-	63.91	46.87
Comments	NMPs more likely than GPs to consider specialising, and treating each condition as a separate entity, provides the best care possible	Non-prescribers more likely than GPs to consider specialising, and treating each condition as a separate entity, provides the best care possible.	Non-prescribers more likely than NMPs to consider specialising, and treating each condition as a separate entity, provides the best care possible.
Component 5: Clinical responsibility	**The need to personally assess patients prior to issuing an acute prescription**		
Mean rank: GPs	110.83	128.42	-
Mean rank: NMPs	59.32	-	37.80
Mean rank: Non-prescribers	-	112.29	61.85
Comments	GPs are more likely to disagree with the need to personally assess a patient, prior to issuing an acute prescription, than NMPs	Result was not statistically significant	Non-prescribers are more likely to disagree with the need to personally assess a patient, prior to issuing an acute prescription, than NMPs

The overall summary of the results from the analysis of the differences between each of the three professional / prescribing groups (GPs, NMPs and non-prescribers) for components 4 and 5 are presented in appendix 2.14

6.4 Patient arm

A total of 330 patient questionnaires were distributed, 30 to each of the eleven practices that agreed to participate, during November 2009. The response rate for returned questionnaires was disappointing at only 17.3% (57/330). However, as questionnaires were handed to a third party (the practices) to distribute, it is not clear whether or not all of the questionnaires were actually distributed – thus potentially the response rate may have been higher. All questionnaires were distributed within locality one. As stipulated within the ethics approval, the questionnaires were not coded for the practices from which the patients were registered, thus no follow-up was possible.

One reason for the low response rate could have been the timing of the distribution of questionnaires. Unfortunately there was a 'flu pandemic (H1N1) at this time and suddenly practices were required to vaccinate at-risk groups of patients thus increasing their workload considerably. Distribution of a questionnaire would have been a low priority. As the response rate was so low this section will concentrate upon some of the descriptive findings only.

6.4.1 Demographic data

Of the 57 respondents 20 were male (35.1%) and 33 were female (57.9%), four respondents (7.0%) did not indicate their gender. The age range was 18 years to 88 years and the distribution of ages, in decades, is detailed in table 43 overleaf. Over half of respondents were over 60 years of age.

Table 43: Age distribution of patient respondents

Age band (years)	Number of respondents
< 20 years	3 (5.3%)
20 – 29 years	2 (3.5%)
30 – 39 years	1 (1.8%)
40 – 49 years	9 (15.8%)
50 – 59 years	8 (14.0%)
60 – 69 years	12 (21.1%)
70 – 79 years	16 (28.1%)
≥ 80 years	3 (5.3%)
No response	3 (5.3%)
Total	57

Almost half the respondents (47.4%) had left full-time education aged 16 years or under. In addition almost half (45.6%) were retired. This is likely to be skewed by the age of the population who responded. Of those that did work 13 (22.8%) worked full-time and 11 (19.3%) worked part-time. The hours worked by those who worked part-time ranged from four hours per week to 32 hours per week, with one respondent stating “varies”. A breakdown of both age when finished full time education and work pattern are given in tables 44 and 45, below and overleaf respectively.

Table 44: Age profile when respondents left full-time education

Age when left full-time education	Number of respondents
≤ 16 years	27 (47.4%)
17 or 18 years	16 (28.1%)
≥ 19 years	9 (15.8%)
Still in F/T education	2 (3.5%)
Missing	3 (5.3%)
Total	57

Table 45: Work patterns of respondents

Work pattern	Number of respondents
Full-time	13 (22.8%)
Part-time	11 (19.3%)
Retired	26 (45.6%)
Missing	7 (12.3%)
Total	57

In addition to the above information, patients were asked about any long-term conditions they had and any medications taken. They were also asked to rate their health within the preceding four weeks. The majority of patients had at least one long-term condition and took regular medication. These results are summarised in tables 46 and 47 below and overleaf respectively.

Table 46: Long-term conditions experienced by respondents[16]

Number of long-term conditions	Number of respondents
None	9 (15.8%)
One	18 (31.6%)
Two	16 (28.6%)
Three	7 (12.3%)
Four or more	2 (3.5%)
Missing	5 (8.8%)
Total	57

[16] Conditions listed within the questionnaire were: Heart problems (e.g. high blood pressure, angina), Diabetes, Breathing problems (e.g. asthma, COPD), Bone / joint problems, Stomach / indigestion problems, Depression, other (please list)

Table 47: Regular medication taken by respondents

Taking regular medication	Number of respondents
Yes	44 (77.2%)
No	10 (17.5%)
Missing	3 (5.3%)
Number of medications taken regularly	**Number of respondents**
None	10 (17.5%)
One	20 (35.1%)
Two	16 (28.1%)
Three	6 (10.5%)
Four or more	2 (3.5%)
Missing	3 (5.3%)
Total	57

In terms of self-rated health over the previous four weeks the majority of respondents considered their health to have been good to excellent, with only a handful rating it as fair to poor. These results are summarised in table 48 below.

Table 48: Self-rated health status in past 4 weeks

Self-rated health status	Number of respondents
Excellent	9 (15.8%)
Very Good	10 (17.5%)
Good	22 (38.6%)
Fair	9 (15.8%)
Poor	1 (1.8%)
Very Poor	3 (5.3%)
Missing	3 (5.3%)
Total	57

6.4.2 Frequency analysis for each question

The majority of the 28 questions had the full range of responses scoring the minimum of one (strongly agree) through to the maximum of 5 (strongly disagree). Only five questions did not and these were all scored between one (strongly agree) and four (disagree). No question was omitted by large numbers of respondents. The maximum number of omissions to a single question was two (3.5%) for question 20. The number of responses plus mean, median and total count for each question are detailed overleaf in table 49. Response rates to individual questions, that raised interesting points, will be discussed further in section 6.5 (the discussion). There will also be some discussion, in this section, comparing the responses of the health care professional arm and that of the patient arm.

Table 49: Overall frequency of response Q1 – Q28 (N = 57)

Statement / question (1-strongly agree, 2–agree, 3-no opinion, 4–disagree, 5–strongly disagree)		**Val**	**Miss**	**Min**	**Max**	**Mean**	**Med**	Strongly agree	agree	No opinion	Dis-agree	Strongly disagree
1.	If it is a serious problem I would like to be able to just turn up at my practice and wait to see a health care professional rather than making an appointment.	57	0	1	4	1.75	2	28 49%	21 37%	2 3%	6 11%	0
2.	I think Friday to Monday is a long time to go without being able to see my doctor if I need to.	57	0	1	5	1.91	2	23 40%	24 42%	4 7%	4 7%	2 3%
3.	I like to be seen within 10 to 15 minutes of my appointment time.	57	0	1	4	1.84	2	21 37%	26 46%	8 14%	2 3%	0
4.	The most important thing is to see any health care professional on the day you want rather than having to wait, even if it's for a minor or routine problem.	57	0	1	5	2.18	2	13 23%	30 53%	6 11%	7 12%	1 2%
5.	I would be happy to wait up to 60 minutes after my appointment time to see my usual GP because he/she knows all about my condition.	56	1	1	5	2.93	3	9 18%	17 30%	7 13%	15 27%	8 14%
6.	It is better for the patient if they can have all their routine practice visits done in a single visit rather than having to return several times to see different people.	57	0	1	4	1.84	2	19 33%	31 54%	4 7%	3 5%	0
7.	By keeping good information on computer systems there is no longer the need to always see the same health care professional.	57	0	1	5	2.86	2	10 18%	19 33%	4 7%	17 30%	7 12%
8.	Big practices are too impersonal: I have to keep repeating the details of what is wrong with me to a different person on each visit.	56	1	1	5	2.32	2	14 25%	17 30%	19 34%	5 9%	1 2%
9.	Pharmacists know about supplying medicines but I don't think they should diagnose what's wrong.	57	0	1	4	2.35	2	17 30%	18 32%	7 12%	15 26%	0
10	It is better to see a GP that knows you as you are less likely to feel rushed during the consultation.	57	0	1	4	1.86	2	21 37%	27 47%	5 9%	4 7%	0
11	I prefer to see a doctor who specialises in my condition(s) instead of seeing my usual GP for everything.	57	0	1	5	2.56	2	8 14%	23 40%	14 25%	10 18%	2 3%
12	Things like measuring my height, weight and blood pressure are important for my practice to keep an eye on my overall health.	57	0	1	5	2.14	2	12 21%	30 53%	11 19%	3 5%	1 2%
13	If my GP says he can only see me Monday to Friday between 9am and 5pm then I am happy to fit in with his schedule.	56	1	1	5	2.45	2	10 18%	27 48%	6 11%	10 18%	3 5%

	Statement / question	Val	Miss	Min	Max	Mean	Med	Strongly agree	agree	No opinion	Dis-agree	Strongly disagree
14	Larger practices are more efficient and can provide better patient care.	57	0	1	5	3.42	3	1 2%	8 14%	22 39%	18 32%	8 14%
15	I would not want to wait more than 60 minutes after my appointment time.	57	0	1	5	1.70	2	26 46%	24 42%	6 11%	0	1 2%
16	Pharmacists are very good at supplying medicines but I don't think they should prescribe medicines like a doctor does.	57	0	1	5	2.42	2	14 25%	21 37%	7 12%	14 25%	1 2%
17	Nurses are very good at practical things like dressings and taking bloods but I don't think they should diagnose what's wrong.	57	0	1	5	2.60	2	8 14%	23 40%	11 19%	14 25%	1 2%
18	Sometimes it feels like they are checking you over for height, weight and blood pressure without actually listening to why you are there.	56	1	1	5	3.16	3	1 2%	17 30%	15 27%	18 32%	5 9%
19	If I think I have something seriously wrong I want to see my usual GP -even if it means I have to wait.	56	1	1	5	3.95	2	16 29%	22 39%	1 2%	11 20%	6 11%
20	It is important to me to have my appointments at times to suit me rather than to suit my practice.	55	2	1	5	2.49	2	10 18%	20 36%	15 27%	8 14%	2 4%
21	Nurses' skills should be used only for "routine" or "minor" problems.	56	1	1	5	2.88	3	5 9%	21 38%	10 18%	16 29%	4 7%
22	I'm happy for nurses and doctors to substitute for each other in those areas where their skills overlap.	56	1	1	5	2.23	2	10 18%	32 57%	7 13%	5 9%	2 4%
23	Nurses are very good at practical things like dressings and taking bloods but I don't think they should prescribe medicines like a doctor does.	57	0	1	5	2.42	2	13 23%	21 37%	10 18%	12 21%	1 2%
24	If it is a minor or routine problem I would like to be able to just turn up and wait to see any HCP rather than making an appointment	57	0	1	5	2.54	2	8 14%	25 44%	10 18%	13 23%	1 2%
25	It is unreasonable to wait more than 15 minutes for my appointment if my appointment is with any doctor who is available.	56	1	1	5	2.82	3	4 7%	19 34%	17 30%	15 27%	1 2%
26	Seeing the same HCP each time is important to me even if it's for something routine or minor (e.g.measuring my blood pressure).	56	1	1	5	2.88	2	8 14%	14 25%	14 25%	17 30%	3 5%
27	I do not mind which health care professional I see as long as they are adequately trained.	57	0	1	5	2.56	2	7 12%	28 49%	8 14%	11 19%	3 5%
28	GPs' skills should be targeted to the "serious" or "difficult" problems only.	56	1	1	5	3.41	4	2 4%	12 21%	9 18%	27 48%	6 11%

6.5 Discussion

A number of important findings, regarding optimal use of limited NHS resources and appropriate skill mix, were raised by this phase of the work programme. It has provided some insight into differences in opinions and attitudes of the three professional groups included. It has also raised some differences in opinion between the views of HCPs and those of patients. These will be discussed further is section 6.5.1 to 6.5.3 below.

6.5.1 Individual statements (HCP arm)

Individual questions of interest were those where more than 75% of respondents had either agreed or disagreed with the statements. Broadly speaking these questions divided into three themes: continuity of care (including responsibility for the patient), skill mix (including the role of the non-medical prescriber and roles and responsibilities) and weekend working (including chronic disease management).

The majority of HCPs (79.6% (N = 241/303)) felt that individual patient continuity of care was more time efficient because, knowing the patient, meant it was easier to arrive at a diagnosis (question 4). Similarly the majority (90.8% (N = 275/303)) did not consider that the effective use of information technology (IT) systems replaced the need for the provision of continuity of care (question 2). A significant proportion of HCP respondents (84.9% (N = 253/298), question 48) felt that as the needs of patients became more complex a team approach was necessary. Approximately half (53.4% (N = 161/302), question 15) felt this team approach needed to be co-ordinated by a single individual, but that the individual did not need to be a GP. However, the majority of HCPs (82.5% (N = 250/303)) felt that the GP should retain overall responsibility for the patient, even if the patient was seeing many health care professionals (question 28). Conversely only 10.6% (N = 32/300) of HCPs felt that it was “bad clinical practice for one GP to meet all the health needs of a patient” (question 39).

In summary, responses to these questions seem to imply that the majority view is that individual continuity of care is time efficient but, with ever increasing and more complex health care needs, a team approach to patient care is becoming necessary. The co-ordination (and hence possible continuity) of this care could be provided by a single individual, not necessarily a GP, but a GP should retain overall responsibility for the patient. Despite this, the majority also felt that a single GP could meet all the health care needs of a patient. This would imply that it is something other than GP skills and knowledge that is driving the need for a team approach to patient care. Possibly it is time, and the need to release more, that is the driver. It is clear from previous studies that time in primary care is a popular area of debate. Whether the requirement for more time is as a result of increasing pressures from the new contract (Morrison & Smith, 2000), increased patient expectations (Mechanic, 2001) or to improve quality (Howie et al., 1999; Freeman et al., 1997), other factors or a combination of all of these is less clear.

In terms of skill mix very few HCPs (24.7% (N = 74/300)) felt it was better for patients to return for additional visits, to see different specialists, rather than having a “one-stop shop” (question 38). Similarly only 21.2% (N = 64/303) felt it was necessary to monitor each condition a patient has as a separate entity, using appropriately trained specialists, rather than having one HCP who deals with everything (question 27). The majority (66.8% (N = 203/304)) considered it was more appropriate for a patient to have all their routine chronic disease management undertaken by one person, in a single visit, even if this covered more than one clinical area (question 23). Just over half the respondents (56.6% (N = 172/304)) felt that one of the benefits of general practice was that you could be a generalist and did not have to specialise (question 5). 67.5% (N = 206/305) felt that specialising meant you dealt with a narrow spectrum of conditions and skills in other areas did not develop (question 11). On the other hand, approximately half (51.7% (N = 157/304)) felt that recent changes to general practice and being able to specialise in an area of

particular interest (e.g. the introduction of GPwSI) had been “liberating” (question 34).

Although there appeared to be some support for specialising the majority of respondents appeared to be supportive of the generalist roles within primary care, supporting the “one stop shop” approach and having the majority, if not all, a patient’s health care needs met in a single visit. This would also support the idea of saving time, for both the patient and the HCP, in primary care and is congruent with principles one and two of the NHS Confederation’s response the Government consultation “Your Health Your Care Your Say” (Department of Health, 2005e). These principles stated:

Principle 1 – Patient’s time is not free: Services need to be available at more convenient times and places. Appointments should take place at the agreed time. Patients should be able to have all of their needs met in the minimum number of encounters, including imaging and blood tests.

Principle 2 – Integration of services is important: Treat patients not diseases – avoid situations in which specialist providers take responsibility for components of care or a particular disease group.

What it does not however appear to support is the development of practitioner’s with special interests, as outlined in the Government document “Liberating the talents: Helping primary care trusts and nurses deliver the NHS plan” (Department of Health, 2002b).

Almost all respondents (90.8% (N = 276/304), question 16) felt that non-medically qualified prescribers must take clinical responsibility for their prescribing decisions. However, less than half of the respondents (41.7% (N = 126/302), question 35) felt that a HCP should only accept responsibility for signing an acute prescription if they had personally assessed the patient and 59.7% (N = 179/300) felt that it was acceptable for a GP to endorse and nurse’s / pharmacist’s prescribing decision by

signing a prescription without personally assessing the patient (question 13). The majority of HCPs (61.8% (N = 185/299)) were happy for nurse and pharmacist NMPs to prescribe as long as they adhered to protocols (question 50), and yet 55.1% (N = 166/301) felt that it was better to base clinical decisions on an intuitive assessment of a patient's condition rather than be driven by protocols (question 37). 57.9% (N = 176/304) of the HCPs felt too much time was wasted having nurses / pharmacists "hanging around just to get a prescription signed" (question 24) and 63.4% (N = 192/303) felt that NMPs saved GP's time (question 26) but only 36.2% (N = 110/304) felt they saved patient's time (by being able to access a HCP sooner) (question 7).

Responses to these questions raise further questions over what actually constitutes prescribing. It would appear that the physical act of signing the prescription is not necessarily prescribing (as the majority felt prescribers should accept clinical responsibility for their prescribing decisions but did not see a problem with signing a prescription for a patient not personally assessed by them). There must, therefore, be another process prior to signing the prescription that is more significant to the prescribing process – possibly the assessment of the patient, or, as suggested by Weiss and Sutton (2009), "*a complex series of processes with distinct tasks and decision points".* Time, and the saving of it, is also a key feature to the introduction of NMP. Whilst the majority of respondents in this study felt NMPs did save GP's time the majority did not feel they saved patient's time. However other studies (Latter & Courtenay, 2004) have suggested that patients like (nurse) NMPs due to both convenience and speed of access. Similarly the same study demonstrated that the nurse NMPs also felt there were time savings. To date there is relatively little, UK based, published data on stakeholder, economic or clinical outcomes. There is, however, evidence (from non-UK healthcare settings) to suggest nurse led interventions in hypertension do improve health outcomes (Clark et al., 2010). One of the reasons identified was that the approach adopted by nurses was more structured with regular reviews and stepped care – they tended to be

more protocol driven. In addition to the above, responses to the initial proposal for the introduction of independent prescribing suggested that a key factor in the introduction of independent prescribing would be team working between the professions involved (Avery & Pringle, 2005). This would support the earlier suggestion of team working, with one person co-ordinating the approach, becoming necessary.

The majority of respondents (63.8% (N = 192/301)) felt there was no need to provide routine chronic disease management evenings and weekends (question 40) and 81.2% (N = 246/303) did not feel that Friday to Monday was a long time for the general public to go without access to routine (not emergency) health care (question 46). Most (72.5% (N = 221/305)) did not feel increasing surgery hours to cover evenings / weekends would improve the overall health of the nation (question 1). If, on the other hand, evening / weekend clinics were provided approximately half (52.6% (N = 159/302)) did not feel a GP would need to be present (question 52) although 69.4% (N = 209/301) considered chronic disease management would always be a key role for GPs to ensure they remained in touch with the breadth of general practice (question 33). Only one-third (33.3% (N = 101/303)) of respondents felt that routine chronic disease management could be undertaken by an appropriately trained non-medically qualified professional (question 8), but 48.8% (N = 148/303) agreed that all their routine chronic disease management was undertaken by the practice nurses (question 10). Approximately half the respondents (55.5% (N = 166/299)) felt that doctors and nurses had overlapping skills making it possible for one to substitute for the other in these areas (question 17).

It is interesting that the majority of respondents felt that chronic disease management would always be a key role for GPs as this would support the previous suggestion of the generalist role, rather than specialising. However it is surprising that only a third felt that routine chronic disease management could be undertaken by an appropriately trained non-medically qualified professional – especially as almost half agreed that all

of their work in this area was currently undertaken by the practice nurses (who it could be considered are “appropriately trained non-medically qualified professionals”) and personal experience, within this locality, suggests that the amount of routine chronic disease management undertaken by practice nurses is possibly even higher than this. It is also interesting that half the respondents appeared to consider that such work could be undertaken by health care professionals, other than a GP, when this involved evening / weekend clinics.

In terms of responses to questions regarding the QOF, views were generally less polarised than in many other areas. The majority (66.4% (N = 200/301)) viewed QOF as a guideline only and did not let it constrain them as a health care professional (question 36). Approximately half (52.5% (N = 159/303)) felt the QOF was a good thing because it enabled identification of patients that had “slipped through the net” (question 12) but 50.7% (N = 152/300) felt the time and energy spent obtaining QOF points was disproportionate to patient benefits (question 51). Just under half (47.2% (N = 144/305)) felt it made it harder to focus on the patient’s reason for coming in (question 25). Slightly more respondents agreed (40.7% (N = 122/300)) rather than disagreed (31.7% (N = 95/300)) that QOF was a good thing because it drove good patient-focused clinical care (question 43). However approximately equal numbers of respondents agreed (41.8% (N = 127/304)) as disagreed (41.1% (N = 125/304)) that obtaining maximum QOF points simply meant you were an organised practice (question 19). Similarly equal numbers agreed as disagreed (both 34.7% (N = 104/300)) that they liked the structure the QOF provided (question 45). Whilst there were varying views on the benefits, or not, of the QOF it does appear to have provided a more structured approach to the clinical domains within it. Interestingly relatively few (29%, (N = 29/100)) of the nurses and none of the pharmacists disagreed with the statement that they liked the structure the QOF provided. This would also support the view that the nurses and pharmacists are more protocol driven than the GPs, liking structure and order.

6.5.2 Original a priori assumptions and components

There was some consistency between the original nine *a priori* assumptions and the final five components within the HCP arm of the study. However it was difficult to quantify this as a number of the statements within the original assumptions could have sat within more than one of them.

The main themes from component 1 concerned efficiency through appropriate skill mix as well as extending practice opening times to include more evening and weekend appointments. It appeared that respondents who felt that there was a need to provide routine chronic disease management evenings and weekends (reverse of question 40 – the highest loading question within component 1) appeared to be in support of utilising nurses to extend surgery opening times. They also felt that non-medically qualified prescribers (nurses and pharmacists) saved both GP's and patient's time and were "*safer prescribers because they follow protocols better*". There is evidence to support the use of nurse practitioners, providing front line primary care, demonstrating similar health outcomes to those of care from a doctor (Horrocks, et al., 2002). This work also demonstrated improved patient satisfaction.

The main theme from component two was the QOF. Respondents who felt the QOF was beneficial because it drove good patient-focused clinical care also liked the structure it provided, both in terms of identifying patients who might otherwise "slip through the net" and in ensuring everything that should be done for the patient was completed. To a lesser extent those that felt this way about the QOF tended to also be in favour of specialising in an area of interest.

The main theme from component three was the benefits of continuity of care and of being a generalist rather than specialising. Conversely the main theme from component four was the benefits of specialising. Not surprisingly the HCPs that felt it was better for patients to return several times to visit different specialists, rather than the "one stop shop"

approach, also felt it was better to monitor each condition a patient has as a separate entity, using appropriately trained specialists, rather than having one person dealing with everything. They also felt it was bad clinical practice for an individual GP to meet all the health care needs of a patient.

The final component, component five, concerned clinical responsibility in the prescribing process. HCPs who felt it was not acceptable for GPs to endorse a nurse's / pharmacist's prescribing decision by signing the prescription without personally assessing the patient, also felt prescribers should only accept responsibility for signing an acute prescription after personally assessing the patient.

It should be noted that the results of components three and five, above, should be interpreted with caution as the result of the reliability test was slightly under the usual acceptability level of 0.6 (Hair et al., 1998), i.e. the measure of these variables may not represent the "true" value and be "error free". The result for component three being 0.571 and for component five being 0.555.

Considering the results of the Mann-Whitney U-test, which looks at differences between two independent variables, GPs showed a significant difference in views, compared with "non GPs", across all five components[17]. The effect was large for components one and four, medium for components two and three and small for component five. GPs were less likely to agree with extending chronic disease management clinics into evenings and weekends as they did not feel this would benefit the overall health of the nation. They also tended to be less in favour of NMPs and practice mergers. This could be because the medical profession, as demonstrated by Cooper et al. (2008), lack awareness and understanding of non-medical prescribing but may also

[17] C1 – weekend working, skill mix and NMP; C2 – QOF; C3 – continuity of care and generalism; C4 – Benefits of specialism; C5 – clinical responsibility;

indicate that GPs wish to retain overall control (with the prescription being seen as a sign of "*professional power",* suggested by Weiss and Sutton (2009)) and their traditional generalist role. This is further supported by results that showed GPs were more in favour of the "one-stop-shop" (rather than specialising) and less likely to see the value of QOF and to accept that clinical responsibility relied on seeing the patient. The "non GPs" were less likely to support the idea of time efficiencies through continuity of care and less in favour of the "one stop shop" approach, preferring to specialise.

When comparing the views of different genders (across the range of respondents) there were significant differences in components one, three and four only. The difference in component three was small, but medium with the other two components. Males were less likely to agree with extending chronic disease management clinics into evenings and weekends as they did not feel this would benefit the overall health of the nation. They also tended to be less in favour of NMPs and practice mergers and more in favour of the "one-stop-shop" rather than specialising. The female respondents were less likely to support the idea of time efficiencies through continuity of care and less in favour of the "one stop shop" approach, preferring to specialise. As almost all the male respondents were GPs it is possible that this may be accounted for as a "GP approach" rather than a gender specific approach.

An identical profile was found when comparing differences between part-time and full-time HCPs (i.e. a small difference in component three, but large with components one and four). Full-time HCPs responded in the same way as male respondents. However, further analysis of demographic profiles revealed that of the 306 respondents, 132 were full-time. Of these 106 (80.3%) were GPs, 9 (6.8%) were pharmacists and 17 (12.9%) were nurses. It is again possible that this is a "GP approach" rather than a reflection based upon working patterns.

There were significant differences between prescribers (whether GPs or NMPs) and “non-prescribers” in all the components except component five. The difference was large for component four, medium for one and three but small for component two. The prescribers were less likely to agree with extending chronic disease management clinics into evenings and weekends, as they didn’t feel this would benefit the overall health of the nation. Interestingly they also tended to be less in favour of NMPs and practice mergers and more in favour of the “one-stop-shop” rather than specialising. As the majority of prescribers were GPs (there were 209 prescribers altogether, of which 176 (84.2%) were GPs and just 33 (15.8%) NMPs) presumably being less in favour of NMPs was a GP effect rather than that of the NMPs themselves. The prescribers were also less likely to agree with specialising and more likely to support the generalist “one stop shop” role. They were less likely to see the value of the QOF – again this is likely to be a GP effect.

The results of the Kruskal-Wallis H-test, which looks at differences between three (or more) independent variables, suggested that there was a significant difference between all three professional groups for component one only. The difference between GPs and nurses and GPs and pharmacists was large and the difference between pharmacists and nurses was medium. The order of difference suggested that GPs were less likely to agree with extending chronic disease management clinics into evenings and weekends, as they didn’t feel this would benefit the overall health of the nation. They also tended to be less in favour of NMPs. The pharmacists were the professional group most in favour of extending chronic disease management clinics into evenings and weekends and of NMPs.

The nurses and pharmacists did not show a significant difference in responses in any other component. The GPs showed a medium effect difference with pharmacists in components two (the QOF), three (benefits of generalism) and four (benefits of specialising). They also demonstrated significant differences with nurses in all three of these components, the

effects being large for component four, medium-large for component three and medium for component two. None of the professional groups demonstrated significant differences in component five (personal clinical responsibility). Analysis of these differences suggests that the GPs were less likely, than either the nurses or pharmacists, to see the benefits of QOF and were less likely to agree with specialising, but were more likely to support continuity of care and the maintenance of the generalist role. GPs were also less likely to consider it necessary to personally assess a patient prior to issuing a prescription than either pharmacists or nurses. There was no significant difference between the nurses and pharmacists in any of these areas.

The findings suggested that when considering prescribing status alongside professional group (GPs, NMPs and “non-prescribers”) there were significant differences in components four (benefits of specialising) and five (personal clinical responsibility) only. GPs demonstrated a significant difference, of medium effect, with NMPs in both components. They demonstrated a large effect, compared with non-prescribers, in component four but did not demonstrate a significant difference, compared with non-prescribers, in component five. NMPs demonstrated a medium effect, compared with non-prescribers, in component four and a medium-large effect for component five. In summary, this suggests that GPs tended to prefer the “one stop shop” approach rather than monitoring each condition as a separate entity – supporting their preference for the traditional generalist role. Non-prescribers were least in favour of this approach preferring patients to undertake more frequent visits to see someone who specialised in their condition(s). GPs were also more likely to feel they did not need to personally assess a patient prior to accepting clinical responsibility by signing a prescription; NMPs were the group least likely to agree with this approach.

Responses by age, broken into both 2 age bands (under 50 years versus 50 years and over) and into 3 age bands (44 years and under, 45 – 52

years and 53 years and over) did not show a statistically significantly difference in any of the components.

6.5.3 Individual statements (patient arm)

Not all opinions agreed with those of the HCPs. For example, 82.5% (N = 47/57) of patients felt Monday to Friday was a long time to go “without being able to see my doctor if I need to” (question 2). On the other hand 64.9% (N = 37/57) did agree with the statement “if my doctor says he can only see me Monday to Friday between 9am and 5pm then I am happy to fit in with his schedule” (question 13). Conversely 54.5% (N = 30/55) felt it was important to have appointments at times to suit them rather than to suit the practice (question 20). It would appear from this that whilst patients prefer to have both more convenient and extended, evening and weekend, opening times (in line with principle one from the NHS confederation response to the DH consultation “Your Health Your Care Your Say” (Department of Health, 2005e)) in reality the majority don’t want this if it doesn’t comply with what their GPs want to provide.

75.4% (N = 43/57) of respondents felt that the most important thing was to see any health care professional on the day they wanted, rather than having to wait, even if it was for a minor or routine problem (question 4). This figure was even higher (86.0% (N = 49/57)) if it was considered a serious problem, then they wanted to be able to turn up and wait to see a health care professional rather than making an appointment (question 1). Only 57.9% (N = 33/57) wanted to turn up to see a health care professional, without making an appointment, if it was for a minor or routine problem (question 24). Previous studies have suggested that access is important to patients (Murfin, 2001), plus the introduction of a range of Government access targets (Department of Health, 2000a) suggest this is a priority. However, more recent studies have demonstrated that, in reality, speed of access is not the most important attribute for patients (Gerard et al., 2008; Salisbury et al., 2007b) when accessing primary care services. In addition different groups of patients have different preferences (Rubin et al., 2006; Turner et al., 2007). This

phase of the study did not consider what other preferences patients may have when accessing primary care services, however, this will be discussed further in the following chapter (as it was considered in the third phase).

Only 39.2% (N = 22/56) felt they needed to see the same health care professional each time if it was for a routine or minor problem, although 35.7% (N = 20/56) disagreed with this (question 26), but 67.9% (N = 38/56) wanted to see their usual GP (even if they had to wait) if they thought they had something seriously wrong (question 19), 30.4% (N = 17/56) did not feel they needed to see their usual GP. Previous research (Turner et al., 2007) has suggested that patients are willing to wait longer to see a GP who was "*well informed about their case"* but prefer quick access for minor problems. However, the same research also indicated that patients also preferred continuity of care with their usual GP for routine check-ups. As with speed of access existing research also suggests that continuity of care is a complex and sophisticated issue (Rubin et al., 2006). Unlike the HCPs 50.9% (N = 29/57) of patients felt that keeping good information on computer systems meant there was no longer any need to always see the same HCP, 42.1% (N = 24/57) did not, however, feel this was the case (question 7).

If appointment times were set, 82.5% (N = 47/57) wanted to be seen within 10 to 15 minutes of that time (question 3) and 41.1% (N = 23/56) felt it was unreasonable to wait more than 15 minutes after the appointment if it was with any available doctor (question 25). On the other hand, 46.4% (N = 26/56) would wait up to 60 minutes after the allocated appointment time if it was for an appointment with their usual GP (who would know about their condition) but 41.1% (N = 23/56) would not be willing to wait up to 60 minutes, even if it was with their usual GP (question 5). 87.7% (N = 50/57) would not want to wait more than 60 minutes (question 15). This is supported by principle one of the NHS confederation response to the DH consultation "Your Health Your Care Your Say" (Department of Health, 2005e), which states:

Principle 1 – Patient's time is not free: Services need to be available at more convenient times and places. Appointments should take place at the agreed time. Patients should be able to have all of their needs met in the minimum number of encounters, including imaging and blood tests.

More patients than HCPs (83% (N = 50/57) versus 67% of HCPs (N = 203/304) preferred to have all their routine practice visits done in a single visit rather than having to return several times to see different people (question 6). The issue of returning for several visits is also considered within principle one of the NHS confederation response to the DH consultation "Your Health Your Care Your Say" (Department of Health, 2005e) as outlined above. Only 54.4% (N = 31/57) preferred to see a doctor who specialised in their condition rather than seeing their usual GP for everything (question 11). 84.2% (N = 48/57) felt it was better to see a GP that knew them as they were less likely to feel as rushed during the consultation (question 10). The majority of patients (73.7% (N =42/57)) felt that routine monitoring of height, weight and blood pressure was important to keep an eye on their overall health (question 12) but 32.1% (N = 18/56) considered it sometimes felt as if HCPs were monitoring these things without actually listening to why they had presented (question 18). Conversley only 19% of HCPs (N = 57/301) agreed with the benefits of routine monitoring of height, weight, blood pressure etc. (question 47 of the HCP questionnaire).

For the purposes of diagnosing a problem the majority felt that this was not a role nurses (54.4% (N =31/57), question 17) or pharmacists (61.4% (N =35/57), question 9) should undertake. On the other hand 61.4% (N = 35/57) claimed they did not mind which HCP they saw as long as they were adequately trained (question 27). In addition 75.0% (N = 42/56) were happy for doctors and nurses to substitute for each other in those areas where their skills overlapped (question 22). Existing research suggests that, within primary care, the areas of overlap are significant and that nurses can deliver at least as high a quality service as GPs in some key areas, namely: first contact for minor problems, routine check

ups of long term conditions and preventative health care (Horrocks et al., 2002). Other studies have demonstrated that the skill mix, in primary care, is changing with more highly qualified nurse practitioners being more involved in traditional GP roles such as differential diagnosis (Charles-Jones et al., 2003). However this research also suggested that as GPs retain the power to decide the level of skill devolvement they also define the division of labour. Whilst not actually considering the skills of diagnosis, there have been studies that have demonstrated patients are satisfied with nurse prescribing (Latter & Courtenay, 2004). There is less research in terms of patient satisfaction with respect to pharmacist prescribing with most of the current research being based on pharmacists' perceptions of prescribing (Tonna et al., 2007) rather than stakeholder outcomes. Studies have, however, demonstrated that patients, in particular younger patients, are receptive to an increased role for pharmacists in drug management but are resistant to change preferring the status quo (Tinelli et al., 2009).

Chapter 7: Method - Phase 3: Discrete Choice Experiment (DCE)

7.1 Introduction

The previous chapter described the results of phase two, the quantitative phase of the study. Unfortunately phase two did not allow an examination of the "trade-offs" patients make when selecting primary care services. For this reason, and due to the poor patient response rate in phase two, it was decided to introduce a third phase. The third phase concentrated solely upon the views of patients using a quantitative approach. The purpose was to examine the relative influences, of a range of factors identified in phase 1 (the qualitative phase, see Chapters 3 and 4) on patients' service preferences, using a discrete choice experiment (DCE) model. This chapter will describe the method utilised and then will go on to discuss the results of this phase.

7.1.1 Discrete Choice experiment (DCE) literature

Discrete Choice Experiments (DCE) have been increasingly used in health economics since the late 1990s when it was realised that health was not the only outcome from health care. Other issues, identified as being important to patients, include process issues such as waiting times, duration of consultation, continuity of care, location of care and type of professional; and, non-health outcomes such as information, reassurance, patient centred care and dignity (Ryan et al., 2007).

The basis for DCE is to elicit preferences, also known as "stated choices". DCEs are designed to examine the trade-offs, between different independent variables (often referred to as attributes), that are made when choosing a product or service. By varying the levels of each attribute different scenarios are created. Respondents are then presented with a number of scenarios and are asked to choose between them. This may be done in a number of ways – ranking experiments or discrete choice experiments: (a) by ranking each scenario out of a pre-determined figure (e.g. 100), (b) by ranking each scenario from 1 to n (where n = the total number of scenarios), or (c) by asking respondents to choose between 2 or more scenarios (Louviere et al., 2003). Each scenario is the

result of different constructions of attribute levels and can demonstrate how patients respond to different treatment options or processes of care. It is important that scenarios are plausible if choices are to be realistic and therefore inferences regarding behaviour are to be reliable. Even so choices are hypothetical and may not reflect actual behaviours.

In this DCE, it was decided to ask respondents to choose between two scenarios (binary discrete response (c)). The reason for this was the relative ease with which patients could choose rather than ranking a large number of scenarios. It was felt patients make “yes / no” and “like / do not like” decisions all the time (e.g. when purchasing a new car or a television) and thus there would be reduced task difficulty. A limitation of this method, however, is that it is highly validated within the context of market products (where it has been used for some time) but may not be as straightforward within the health care setting and treatment option decision making process.

Health care studies that have used DCE have gone beyond the patient attributes (listed above) to consider the preferences of the professional. It has also been suggested that NICE (now the National Institute for Health and Clinical Excellence) should consider DCE for patient centred evaluations of technologies (Ryan, 2004). However, there has also been criticism of DCE suggesting that they do not accurately reflect judgement processes (Ryan and San Miguel, 2004) and that they are too sensitive to the vagaries of wording and / or context (Scott et al. 2003).

Research has demonstrated patients’ preferences for accessing primary care is not straightforward. It varies with the individual circumstance of the patient and may be influenced by factors such as gender, age, complexity of presenting condition, employment status and social or educational status. Amongst other areas DCE has been used to examine patient preferences for a range health attributes. A brief sample of these and some of the key results are outlined in table 50 overleaf.

Table 50: Examples of DCE to elicit patient preferences in health and key results

No.	Topic	Reference	Key Results
1	Accessing out of hours health care	Scott, 2002	Not relevant to this thesis and therefore not discussed
2	Organising primary care consultations (access, continuity, technical quality of care and communication)	Cheraghi-Sohi et al., 2008	Patients tend to prefer thoroughness of the physical examination over relational continuity which was preferred over the approachability of the physician, reduced time to appointment and flexibility of appointment times. Relational continuity was preferred over patient centred care.
3	Accessing emergency services during usual GP surgery hours	Gerard and Lattimer, 2005	Not relevant to this thesis and therefore not discussed
4	Assessing the importance of continuity of care (compared with other aspects of primary care consultations: access, relational continuity, informational continuity and type of professional)	Turner et al., 2007	Patients will trade fast access of appointments for relational continuity for conditions where there is uncertainty and for routine check-ups. They are however more likely to trade relational continuity for speed of access for “low impact” or minor symptoms
5	Shared decision making (SDM) in primary care	Longo et al., 2006	Patients prefer consultations in which they are involved in the decision making process, but do not have to take responsibility for it, over both the extremes: informed choice and the paternalistic approach. This may, however, be influenced by both the type of condition and the training the GP has received in shared decision making skills
6	Increased pharmacist role in the management of drug therapy	Tinelli et al., 2009	Patients value the input of pharmacists but are resistant to change, although younger patients are less so
7	Investigating factors influencing user choices to visit either general practitioners or community pharmacists in the management of minor ailments	Hughes et al., 2008	Not relevant to this thesis and therefore not discussed

7.2 Aim and Objectives

7.2.1 Aim

To study the feasibility of using a discrete choice experiment (DCE) to assess patients' preferences for the type of primary care service they would like to receive for the treatment of hypertension

7.2.2 Objectives

- To explore the relative priorities, and trade-offs, patients place on a number of variables (relating to speed of access, type of professional, continuity of care, timing, frequency and duration of consultation and specialisms) when considering choice of service.

- To compare actual preferences of patients, demonstrated by a DCE, with their stated preferences, in a self ranked choice experiment, for the same variables.

7.3 Method

7.3.1 Questionnaire design

7.3.1.1 Attributes and levels

The DCE phase involved patients responding to a series of paired scenarios in response to a set problem. The problem remained constant throughout the study. In this DCE it specified:

> "You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it."

Blood pressure was selected for the set problem because hypertensive patients were chosen in the initial qualitative work (refer to chapter three). In addition, a reasonable proportion of the population would have experienced high blood pressure (personally or through friends / relatives)

and it is not uncommon, in the early treatment phase, for a patient to experience side effects, such as headaches, to medication. The attributes, and levels, selected are often defined by literature review and qualitative work (Coast and Horrocks, 2007). It was therefore decided to revisit phase one of this study (the qualitative phase) and to base the attributes and levels on this work.

Following on from the scenario, respondents were then presented with a choice of two “visit types”, from which they selected their preferred one. Each visit type utilised a series of seven independent variables (attributes). The attributes were selected because they were all either highlighted in phase one as being of importance to patients or because they produced a diversity of response from patients. They also drew upon the principles outlined in the NHS Confederation’s response to the consultation “Your Health, Your Care, Your Say” (Department of Health, 2005e). The principles, pertinent to this study, are outlined in section 2.4 and are summarised overleaf, in tables 51 to 57, along with some of the appropriate patient quotes from the patient arm of the study:

Table 51: Attribute 1 - Consultation duration

Quote	***Principle from NHS Confederation response* / Patient quote**
"*Patients need to be in control – enable patients to set their own length for appointments*"	Principle 4
"I suppose the longer appointments seemed friendlier....it (setting own consultation time) maybe sounds good but then I think some people might demand it too often....maybe the wrong people would be the ones wanting to take that time."	Patient 11
"You don't like to mention it because you think you have only got a few minutes so you have got to gallop it out quickly, get out, be pushed out....."	Patient 2
"I find it is a lot more rushed with the doctors and very often he answers telephone calls from other people which I find a little bit off putting".	Patient 3

Table 52: Attribute 2 – Waiting times

Quote	***Principle from NHS Confederation response* / Patient quote**
"*Patients time is not free – appointments should take place at the agreed time*"	Principle 1
"It (the appointment time) was about 5.10pm, but it was gone 6pm when I went in there. That's no good."	Patient 7
"We are retired; time makes no difference to us now. Perhaps if we were (working) it would do. If he (the GP) wasn't on time and he was going to be late, we would have to say "sorry, we have to go and I will make another appointment"	Patient 4

Table 53: Attribute 3 – Convenience of appointment

Quote	***Principle from NHS Confederation response* / Patient quote**
"*Patients time is not free – services need to be available at more convenient times and places*"	Principle 1
"I have a very busy work diary but I am lucky in the sense that my diary is in my control so because I want to get my blood pressure sorted out I have been letting my appointments take precedence over other things. I will cancel meetings if needed"	Patient 19
"If I need a check-up by my doctor, for whatever reason, then if he says he can't see you from Monday to Friday in the evening. Only 9am – 6pm, then I will make sure I am there. My health is more important."	Patient 10
"I know this practice is open in the afternoon but I don't think it is past teatime. The last appointment is probably 5pm so I suppose for people who do work it would be beneficial if they could come after work. ....Years ago they used to do more home visits and work day and night. Well doctors aren't going to now, they want more regular hours it seems.....the old system was probably better."	Patient 3

Table 54: Attribute 4 – Type of professional

Quote	***Principle from NHS Confederation response* / Patient quote**
"*See the most appropriate professional*"	Principle 9
"I think the nurses at the surgery where I go are more there to take stitches out and give injections"	Patient 17
"There is no professional person to contact at weekends when the doctor's surgery is closed"	Patient 6

Table 55: Attribute 5 – Continuity of care

Quote	***Principle from NHS Confederation response* / Patient quote**
"*Continuity matters – shared decision making between patients and professionals is important*"	Principle 3
"I have seen other doctors on occasion for various things and I think at the end of the day when you go and see a doctor if you are ill and the doctor can advise you and make that illness better, you don't really care do you?"	Patient 14
"They get to know you more, they know the person and your different problems, if you go to different one you have to explain it all again".	Patient 15
"I wouldn't mind if it was someone I didn't know. It doesn't necessarily matter if you're just doing an MOT sort of thing, but if you have got something wrong and you have got a problem you want to see the doctor and you want to see the same one."	Patient 3

Table 56: Attribute 6 – Specialism

Quote	***Principle from NHS Confederation response* / Patient quote**
"*Integration of services is important – avoid situations in which specialist providers take responsibility for components of care or a particular disease group*"	Principle 2
"Nurses would be for specific things, like... I went there when I started having injections so that she could tell me what to do and things like that....a boil, or...I've got some corns growing on my feet. They could deal with that."	Patient 1
"You go and see the nurse for something you want doing. High blood pressure test....they are taking bloods and sending them off."	Patient 10

Table 57: Attribute 7 – Promptness of appointment

Quote	**Patient quote**
"For me the most important thing is to see a GP on the day."	Patient 19
"The Government says you shouldn't have to wait for so long to get an appointment, which is alright for the Government figures and it works well in respect of you can get an appointment reasonably quickly but sometimes I don't particularly want an appointment until next week, which they are unable to do."	Patient 4
"Reassurance that you can come down immediately if you need to.....(is good)".	Patient 3

An eighth attribute ("shared decision making" (SDM), principle three of the NHS Confederation's response to the consultation "Your Health, Your Care, Your Say" (Department of Health, 2005e)) was also considered.

Unfortunately it was found to be too complex to convey in the case scenarios. A decision was therefore taken not to include it.

Having decided upon the attributes it was then necessary to select the levels for each attribute. Whilst it is not necessary to select the same number of levels for each attribute (Hensher et al., 2007) doing so makes the design easier. If each attribute has the same number of levels then the factorial design is said to be symmetrical. The levels need to be plausible, and varied over a relevant range, if they are to be taken seriously (Street & Burgess, 2007). Consequently levels were chosen that reflected current, or existing, practice (e.g. 10 minute consultation durations and 20 minutes for some clinics) ("revealed preferences") or that were considered achievable adaptations to this (e.g. extending some clinics to 30 minute consultations) ("stated preferences"). The stated preferences provide an insight into what shifts and "trade-offs" patients are willing to make.

Deciding upon the number of levels for each attribute was the next step. The more levels of an attribute that are measured the more information is captured regarding the preference (or utility) however the more attributes and / or levels there are the greater the burden on the respondents (Hensher et al., 2007). Having three levels better describes how the utility changes when compared with just two levels (refer to figure 1, overleaf (Hensher et al., 2007)). Four would better describe it again however this increases the cognitive burden and number of pair wise scenarios required. It was therefore decided to use three levels for all seven attributes. In determining the levels for each attribute, it was assumed that an attribute level of two would be the level that would be perceived as "best" by patients i.e. The "best" level was assigned a two, the "worst" a zero and the mid point a one.

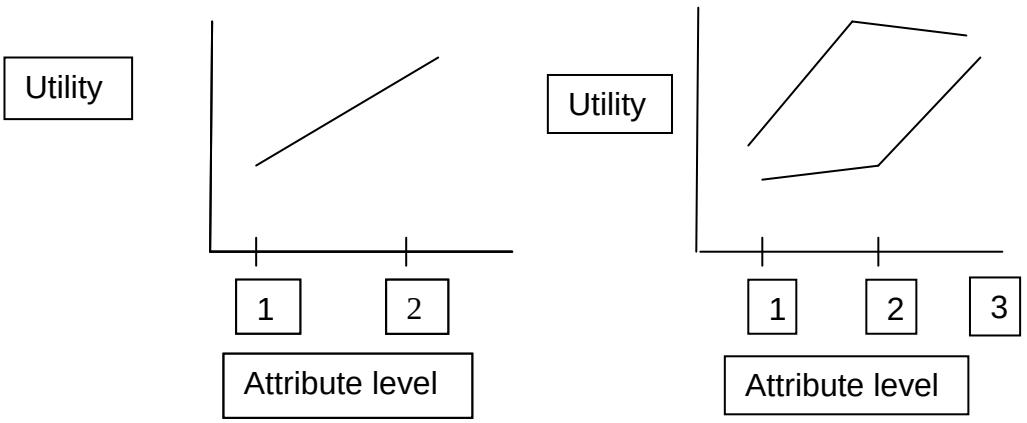


Figure 2: Mapping utilities with 2 or 3 attribute levels

The seven independent variables (attributes) and their levels are listed overleaf (table 58). Each level, within an attribute, has been coded (with either 0, 1 or 2) so that beta values (refer to section 7.3.1.2) and the reference variable (given the value of zero) may be identified. The reference variable is the variable against which the others are determined.

Table 58: Attributes and levels for the DCE questionnaires (design coding)

Attribute	Level for each attribute (design coding)	Variable name
1 - Time spent in the consultation with HCP	10 minute (0) 20 minute (1) 30 minute (2)	Consultation duration
2 – Time patient is prepared to wait after the allocated appointment time	60 minutes (0) 20 minutes (1) 0 minutes (2)	Waiting times
3 – Convenience (to the patient) of the appointment time offered	Not at all convenient (0) Mildly inconvenient (1) Convenient (2)	Convenience
4 – Professional status of practitioner patient is offered an appointment with	Pharmacist (0) Nurse (1) GP (2)	Type of professional
5 – Relationship with practitioner patient is offered an appointment with	Never met (0) Met once or twice previously (1) Know well, a practitioner usually seen (2)	Continuity of care
6 – Perceived skill, and interest, of practitioner in the management of high blood pressure (BP)	A generalist with no additional training in managing high blood pressure (0) A professional who has received some extra training in managing high blood pressure (1) A professional with a special interest, and additional training, in the management of high blood pressure (2)	Specialist care
7 – Accessibility of available appointment times	Next week (0) The day after tomorrow (1) Today (2)	Promptness of appointment

The attributes, and levels, were then modelled statistically in a pair wise DCE. The number of scenarios presented was determined from first principles to ensure the maximum variation for each attribute using the minimum number of scenarios.

7.3.1.2 Scenarios

A complete factorial design would include every possible combination of each level for each attribute (Street and Burgess, 2007) and it allows us to determine each attribute and every possible interaction independently. As

outlined at the beginning of this section (7.3.1.1) this design has 7 attributes each with 3 levels. A factorial design with 7 attributes, each with 3 levels, will have 3^7 possible combinations (i.e. the actual array would yield 3^7 (2,187) possible scenarios). Clearly in terms of burden on the respondents and the number of respondents required this is not practicable. Consequently a fractional factorial design is used. A fractional factorial design involves a smaller number of scenarios and assumes independence of the variables (i.e. orthogonality, or zero correlations between attributes[18]) and enables independent estimation of all the main effects. The main effects estimate 70-90% of the interactions (Louviere et al., 2003), thus an orthogonal array is still robust.

In calculating the fractional factorial design the first 3 attributes (β_1, β_2, β_3) were used to form a full factorial block i.e. 3 attributes each with 3 levels would generate a full factorial design of 3^3 (i.e. 27 scenarios). Using relevant formulae (Street and Burgess, 2007) β_1, β_2, β_3 are used to generate β_4, β_5, β_6, β_7. The formulae used were the following:

$\beta_4 = \beta_1 + \beta_2 + \beta_3 \,(\text{MOD } 3)$
$\beta_5 = \beta_1 + \beta_2 + 2\beta_3 \,(\text{MOD } 3)$
$\beta_6 = \beta_1 + 2\beta_2 + \beta_3 \,(\text{MOD } 3)$
$\beta_7 = \beta_1 + 2\beta_2 + 2\beta_3 \,(\text{MOD } 3)$

Operation MOD 3 is simply the module operator which “counts” the results for the above summations in a clockwise (see figure 2, overleaf) fashion.

[18] Note: attributes may be perceptually correlated but statistically they are considered independent

i.e.

0+0+0 = 0

0+0+1 = 1

0+0+2 = 2

0+1+0 = 1

0+1+1 = 2 etc.,

But:

0+1+2 = 3 with “3” represented as “0” (refer to figure 2), and,

0+2+1 = 3 = 0 (as above), and,

0+2+2 = 4 with “4” represented as “1” (refer to figure 2), and,

2+2+1 = 5 with “5” represented as “2” (refer to figure 2), and,

2+2+2 = 6 with “3” represented as “0” (refer to figure 2), etc.

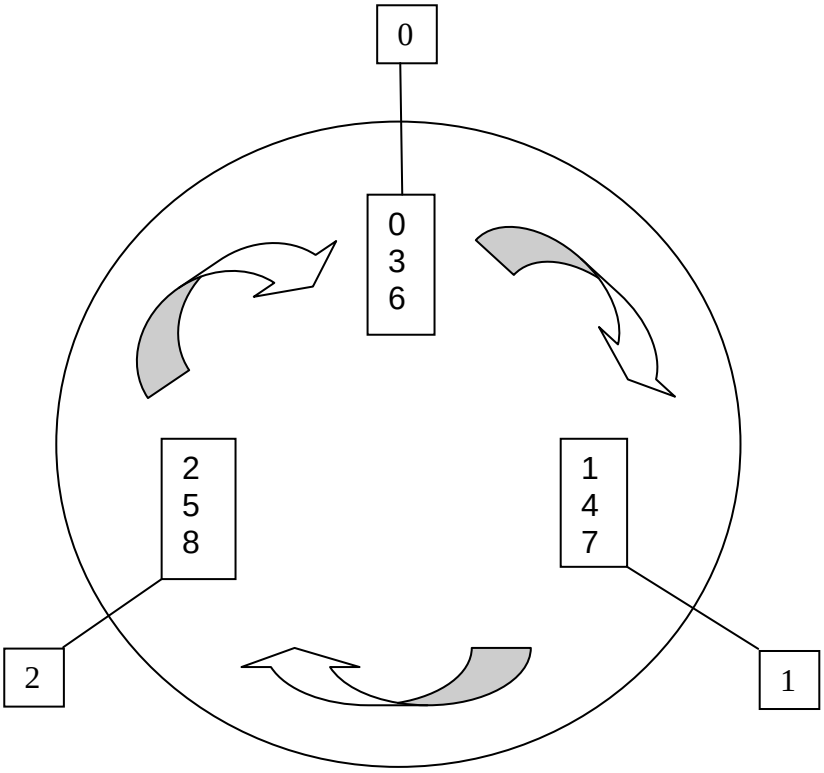


Figure 3: Module operator counting clockwise

The above fractional factorial design generated 27 scenarios. This is too many scenarios for one respondent to answer. Usually between 9 and 16 scenarios are used in health care before the respondent loses interest (Ryan and Bate, 2001). Consequently, it was decided to generate three questionnaires each with nine scenarios and, in order to ensure that the questionnaire design maintained statistical properties (or, orthogonality) an eighth attribute (β_8) was generated to determine 3 orthogonal questionnaires. This means that individual questionnaires are independent. It also ensures the complete balance of the number of times that each level is presented to the respondent.

The eighth attribute is calculated from the following formulae (Street and Burgess, 2007):

$\beta_8 = \beta_1 + \beta_2 \,(\text{MOD } 3)$

Having completed the above equations (to calculate β_4, β_5, β_6, β_7, and β_8) the final fractional factorial design is represented in table 59 overleaf (A1 = attribute 1, A2 = attribute 2, etc.; S1 = scenario 1, S2 = scenario 2, etc.). For β_4, β_5, β_6, β_7, and β_8 the mod3 (M_3) values are shown. The groupings identified in attribute 8 (A8 M_3) indicate the final scenario groupings for each questionnaire, e.g. A “0” under the M_3 column for A_8 indicates that the scenario sits in the first questionnaire, a “1” here indicates that it sits within the second questionnaire and a “2” here indicates that it sits within the third questionnaire.

Table 59: Fractional factorial design for each of the three questionnaires

	A1 β_1	**A2** β_2	**A3** β_3	**A4 M_3** $(\beta_1+\beta_2+\beta_3)$	**A5 M_3** $(\beta_1+\beta_2+2\beta_3)$	**A6 M_3** $(\beta_1+2\beta_2+\beta_3)$	**A7 M_3** $(\beta_1+2\beta_2+2\beta_3)$	**A8 M_3** $(\beta_1+\beta_2)$
S1	0	0	0	0	0	0	0	0
S2	0	0	1	1	2	1	2	0
S3	0	0	2	2	1	2	1	0
S4	0	1	0	1	1	2	2	1
S5	0	1	1	2	0	0	1	1
S6	0	1	2	0	2	1	0	1
S7	0	2	0	2	2	1	1	2
S8	0	2	1	0	1	2	0	2
S9	0	2	2	1	0	0	2	2
S10	1	0	0	1	1	1	1	1
S11	1	0	1	2	0	2	1	1
S12	1	0	2	0	2	0	2	1
S13	1	1	0	2	2	0	0	2
S14	1	1	1	0	1	1	2	2
S15	1	1	2	1	0	2	1	2
S16	1	2	0	0	0	2	2	0
S17	1	2	1	1	2	0	1	0
S18	1	2	2	2	1	1	0	0
S19	2	0	0	2	2	2	2	2
S20	2	0	1	0	1	0	1	2
S21	2	0	2	1	0	1	0	2
S22	2	1	0	0	0	1	0	0
S23	2	1	1	1	2	2	0	0
S24	2	1	2	2	1	0	2	0
S25	2	2	0	1	1	0	0	1
S26	2	2	1	2	0	1	2	1
S27	2	2	2	0	2	2	1	1

However, this is not the final questionnaire format. In order to improve estimate precision, each questionnaire should include extreme scenarios (i.e. a scenario with all zeros and a scenario with all twos) (Montgomery,

2008). It should be noted that scenario 1 (S1) already contains all zeros thus it is not necessary to include this scenario again. Consequently questionnaire version one (as indicated by the "0" value in column A8 M_3) will contain only 10 scenarios (the nine scenarios with a value of "0" in column A8 M_3) plus a scenario with all twos; but, questionnaire versions two and three (as indicated by the "1" or "2" value respectively in column A8 M_3) will contain 11 scenarios: the nine scenarios with a value of "1" or "2" respectively for column A8 M_3, plus each questionnaire will also have a scenario with all zeros and a scenario with all twos.

In developing the questionnaire the final phase was to decide upon the method of pairing scenarios. This can be done in many ways (Ryan et al., 2007). Two commonly used formats are: (a) Using "fold-overs" to identify the counterpart (this occurs when for any one combination the "paired" combination (i.e. the comparator scenario) uses a different level for each attribute)[19], or (b) by using a constant scenario. The fold-over approach is statistically stronger, however, it might place too much cognitive pressure on the respondent. It was considered that the number of attributes and levels (and hence scenarios) within each questionnaire would already place a significant cognitive burden on respondents thus it was decided to use the constant scenario approach in an attempt to minimise this.

The constant scenario approach may be defined in a number of ways. It may utilise "normal" practice as the constant or it may utilise the middle point (or even the "best" / "worst" points). It was considered too difficult to identify "normal" practice within the context of this study therefore it was decided to use the mid-point (i.e. 1,1,1,1,1,1,1 for each attribute) as the constant scenario – this is both easy to analyse and to interpret.

[19] A foldover is when you have a scenario and the comparator is derived by using the opposite levels to the first. For instance if the first scenario in choice one has the attributes levels 010, then the comparator scenario would have the attribute levels 101. Similarly, if a scenario has the attributes 111, then its comparator would be 000.

Considering all of the above the final design of each questionnaire is represented in tables 60 to 62 below and overleaf.

Table 60: Construct questionnaire 1

	A1	**A2**	**A3**	**A4**	**A5**	**A6**	**A7**
S1 ("worst")	**0**	**0**	**0**	**0**	**0**	**0**	**0**
S2	0	0	1	1	2	1	2
S3	0	0	2	2	1	2	1
S16	1	2	0	0	0	2	2
S17	1	2	1	1	2	0	1
S18	1	2	2	2	1	1	0
S22	2	1	0	0	0	1	0
S23	2	1	1	1	2	2	0
S24	2	1	2	2	1	0	2
"best"	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Constant scenario	**1**	**1**	**1**	**1**	**1**	**1**	**1**

Table 61: Construct questionnaire 2

	A1	**A2**	**A3**	**A4**	**A5**	**A6**	**A7**
"Worst"	**0**	**0**	**0**	**0**	**0**	**0**	**0**
S4	0	1	0	1	1	2	2
S5	0	1	1	2	0	0	1
S6	0	1	2	0	2	1	0
S10	1	0	0	1	1	1	1
S11	1	0	1	2	0	2	1
S12	1	0	2	0	2	0	2
S25	2	2	0	1	1	0	0
S26	2	2	1	2	0	1	2
S27	2	2	2	0	2	2	1
"Best"	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Constant scenario	**1**	**1**	**1**	**1**	**1**	**1**	**1**

Table 62: Construct questionnaire 3

	A1	A2	A3	A4	A5	A6	A7
"Worst"	**0**	**0**	**0**	**0**	**0**	**0**	**0**
S7	0	2	0	2	2	1	1
S8	0	2	1	0	1	2	0
S9	0	2	2	1	0	0	2
S13	1	1	0	2	2	0	0
S14	1	1	1	0	1	1	2
S15	1	1	2	1	0	2	1
S19	2	0	0	2	2	2	2
S20	2	0	1	0	1	0	1
S21	2	0	2	1	0	1	0
"Best"	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Constant scenario	**1**	**1**	**1**	**1**	**1**	**1**	**1**

A total of three questionnaires were produced, these contained 10, 11 and 11 paired scenarios respectively.

Previous advice from the ethics committee (for the questionnaire design utilised in phase two of this programme of work) suggested information regarding the study should be inserted as a sheet at the start of the questionnaire (rather than as a separate sheet). It was decided to continue with this advice. The information stressed the importance of this being a study regarding preferences only. It also highlighted the confidential nature of these preferences, that participation was entirely voluntary and that their care would not be affected in any way. In addition, the seven attributes were also presented in a "ranking exercise" within the first section (before the scenarios were presented). This gave respondents the chance to list, in order of priority, what they considered to be the most important (ranked number one) through to the least important (ranked number seven) attribute of their consultations.

7.3.1.3 Demographic data

The final section of the questionnaire related to demographic details of the respondent. As each questionnaire was already quite lengthy it was decided to keep this section to a minimum requesting data for only a small number of variables. This section requested details of age (year of birth), gender, work patterns, attendance (or not) at higher education, any chronic medical condition and whether or not regular medication was taken for this condition, as well as a self rated health score for the previous four weeks (very poor, poor, fair, good, very good, excellent).

7.3.1.4 Questionnaire layout

Initially several questionnaire layouts were considered. These included both portrait and landscape layouts as well as full text versus bullet points for each of the seven attributes within the scenarios. Layout designs utilised in similar DCE studies were also considered (Cheraghi-Sohi et al., 2008; Longo et al., 2006; Rubin et al., 2006).

To make the questionnaire more appealing to respondents, and thus hopefully increase the response rate, it was also decided that the use of colour should be incorporated (Edwards et al., 2002; Presser et al., 2004; Payne et al., 1993).

7.3.1.5 Pilot study

Questionnaire one was piloted twice, amongst five friends, family and colleagues each time. As wording and layout within each of the three questionnaires was intended to be consistent (only the scenarios would change) it was not felt necessary to pilot questionnaires two and three. Pilot participants were asked for comments on ease of understanding of each scenario, use of language (plain English), layout and design and appropriateness of the scenarios presented. A landscape, bullet pointed design was selected by all the pilot participants. In addition, adjustments were made to the questionnaire in terms of clarification of wording and layout. The alterations made were:

- An additional paragraph was included, in the covering sheet, entitled “Why have I been asked to take part in this study?”
- The time limit (of 2 to 3 weeks) for return of the questionnaire was removed from the covering sheet – there were concerns respondents may panic if they did not return the questionnaire within the specified timeframe.
- In selecting “What’s important to me” (the ranking exercise) an option to number the responses was included, as it was considered writing each sentence took too long. This option was added plus key words were highlighted and underlined in red so that the respondent could, if required, just transcribe the key words.
- The example scenario was highlighted. Pilot respondents found the original example too confusing and tried to respond to it without realising it was just an example.
- The words “…after your appointment time” were added to each phrase that outlined the waiting time (“You have to wait one hour / 20 minutes after your appointment time”)
- The font size was increased to 14 (from 12) to aid clarity.
- A student box was added to the employment section.

No further comments were received after the second pilot.

During the original ethics application two sample scenarios only were included (refer to section 7.3.2.4). Upon finalisation of the questionnaire, following the pilots, a “major alteration” submission was therefore necessary. This was duly completed and the questionnaire resubmitted for ethics approval (see appendix 3.1 for inital ethics approval and appendix 3.2 for the major alteration approval). Final versions of the three questionnaires are in appendices 3.3, 3.4 and 3.5 respectively.

7.3.2 Sampling

7.3.2.1 Practices

Once ethics approval was received (see appendix 3.2), a formal written approach was made, via the practice manager, to 10 GP practices within

locality one. The letter (see appendix 3.6) outlined the study and requested permission for patient participation. Practices to participate were selected initially based upon geographical location (rural, urban, city centre), practice size and demographics of the locality. As with phase two, the intention was to reflect views as broadly as possible.

Eight practices consented to participate. Upon confirming a willingness to participate 30 questionnaires (10 of each of the three questionnaires), accompanied by 30 Freepost envelopes, were sent to the respective Practice Managers to hand to reception staff for onward distribution to patients.

7.3.2.2 Patients

Within selected practices reception staff prospectively handed out questionnaires to approximately 30 patients who arrived, consecutively at the practice, for an appointment with the GP, nurse or pharmacist. It was anticipated that approximately 200 questionnaires in total would be handed out to give sufficient patient numbers to inform the study. The intention was to receive approximately 100 (50% response rate) completed questionnaires (refer to section 7.3.2.3).

In line with ethical guidance the questionnaires were not coded by GP practice. Only the main researcher knew which practices had agreed to participate but she did not know who was / was not handed questionnaires. There was no further follow-up.

7.3.2.3 Sample size

Three considerations informed the sample size for this research:

(a) Sample sizes used in comparable previous research (Ryan et al. 1998; Vick and Scott, 1998),

(b) Expert opinion (Longo, Mirella. Personal communication, 2010)

(c) The response rates from the target populations achieved in previous research of this nature. Previous research (Hughes et al., 2008) and publications (Cohen, 1992) suggest that approximately 100 responses are required to inform this type of DCE. Current

research suggests that response rates from patients are in the region of 50-60% (Bandolier, 2010). Based upon such response rates, 200 patient questionnaires would yield approximately 100 responses.

7.3.2.4 Ethical considerations

Individual consent to participation was deemed given upon completion (and return) of the questionnaire. A Freepost reply envelope accompanied all questionnaires.

To minimise any difficulty for reception staff in handing out patient questionnaires exclusions were kept to a minimum. Only the recently bereaved or those perceived, by the practice, to be in distress or confused were excluded. Upon the recommendation of the local ethics committee unaccompanied patients under the age of 16 years were also excluded. It was, however, agreed that they could be handed to an accompanying parent (of a patient under the age of 16 years) to either complete from their own perspective or on behalf of their child. It was considered that both viewpoints would be equally valid. There were no other exclusions.

7.3.3 Main Study

Between April 2010 and June 2010, 30 questionnaires (10 of each of the three versions) were sent to eight practices within locality one for onward distribution to patients presenting to see either a GP, practice nurse or practice based pharmacist. To facilitate response rates (Edwards et al., 2002) Freepost envelopes, addressed to the University of Bath, were also enclosed. As a result of recommendations from the pilot studies, there were no timescales for responses to be returned. Some responses were not received until the end of September 2010. It was anticipated that the end of financial year, prior to summer holiday rush, would not be too busy a time for practices and thus facilitate the handing out of the questionnaires, and hence the response rate.

As responses were received, they were entered into Predictive Analytical SoftWare (PASW) (formerly SPSS) version 18 for analysis (refer to section 7.3.4).

There were no requests for feedback from the questionnaires (in response to an offer in the covering page accompanying each one).

7.3.4 Data analysis and interpretation

Data was entered into, and analysed with, the PASW version 18 (Predictive Analytics SoftWare. Data files were created, variables entered and individual data looked at descriptively. As each respondent was answering 10 or 11 "questions" (or pair of choices), depending upon the questionnaire version they received, it was necessary to have 10 or 11 rows of responses per respondent. To allow for non-linear effects[20] in the attribute levels it was necessary to create a number of variables for each attribute. These are known as dummy variables – they avoid assuming that the changes between attribute options are ordinal. The number of new variables created is equal to the number of levels of the attribute being coded minus one (i.e. in this case 3 - 1 = 2, as all attributes had three levels) (Hensher et al., 2007).

An example of creating dummy variables can be considered using the attribute of consultation length. This has three levels, 10 minutes, 20 minutes and 30 minutes, thus we need to create two new (or dummy) variables. For ease these may be referred to as consultation_length$_{30}$ and consultation_length$_{20}$. It may be hypothesised that a 30 minute consultation (consultation_length$_{30}$) is the preferred option and thus associated with high levels of satisfaction. Consequently whenever the consultation length is at 30 minutes (or "high") we will place a one in the corresponding dummy variable column (consultation_length$_{30}$), if the attribute is something other than "high" a zero should be placed in the column. Similarly if a "medium" consultation (i.e. 20 minutes) is received

[20] A linear effect means the difference in utility between the low and medium levels (for each attribute) and the medium and high levels is the same. In reality this is rarely the case, thus "dummy coding" allows for the non-linear effects in the levels of attributes.

the dummy variable consultation_length$_{20}$ scores one (and zero if not). As there are only two variables but three levels, the “low” value is represented by zero in both dummy variable columns (consultation_length$_{30}$ and consultation_length$_{20}$) (Hensher et al., 2007). This is represented in table 7. 14 below:

Table 63: Dummy Coding

Attribute level:	**consultation_length$_{30}$**	**consultation_length$_{20}$**
High (2)	1	0
Medium (1)	0	1
Low (0)	0	0

Dummy variables were created for each of the seven attributes (see appendix 3.7, tables 89 to 92), allowing for non-linear effects to be tested in the levels of the attributes.

Inspection of frequencies for each categorical variable (i.e. gender, profession, locality, list size) was used to check for input errors. An inspection of the descriptive statistics was used to check for input errors for the continuous variables (such as age and weekly hours worked). Questionnaire items were then subjected to analysis.

In this DCE the dependent variable of interest (that is, what we are trying to explain or predict) is categorical (e.g. “yes / no”, “win / lose” or, in this case, “A / B”) rather than continuous (e.g. age, shoes size, weight, height, etc.). If the dependent variable is continuous (with a reasonably normal distribution) multiple regression may be used to explore the impact of a range of independent factors on the dependent variable. If, however, it is categorical then logistic regression (also known as nominal regression) should be used (Pallant, 2007). The independent / predictor variables (or attributes) may be categorical or continuous or a mixture of both. PASW (version 18) was initially used to test all the independent / predictor variables *en masse* to assess their predictive ability. As the dependent

variable was dichotomous (i.e. with only two categories or values) the procedure known as binary logistic regression was used. The final stage was then to use a step-wise regression to determine a sub-set of potential predictors that provides the best predictive power.

A logistic regression model using PASW (version 18) accounted for correlations at individual level and the multiple responses from within each individual level. Due to the way in which the dummy variables were coded, the dependent variable represented the probability of moving away from a scenario which had attributes all at a level of zero (the reference scenario). Dummy variables (as described above) were used for the attributes' levels to avoid assuming that the changes between attribute options were ordinal.

In addition to the above MLwiN (version 2.14) was also utilised to calculate the utility values indicating the weighting, or order of preference, respondents placed on each of the independent variables. This was undertaken to check the consistency of the results.

For the responses, the results are presented in the following order:

(a) Response rate (7.4.1)
(b) Ranking exercise (7.4.2)
(c) Pair-wise choices: trading and non-trading choice patterns (7.4.3)
(d) Pair-wise choices: main effect model and interactions (i) MLwiN (version 2.14) (7.4.4.1) and (ii) PASW (version 18) (7.4.4.2)

7.4 Results

A Pearson correlation was used to look at the correlations of all the main effects. The results demonstrated low correlations between attributes thus the model was appropriate. The results of the Pearson correlation are presented in table 64 overleaf.

Table 64: Pearson correlations of all the main effects

		1	2	3	4	5	6	7	Quest. version
1	Pearson correlation	1	.000	.000	.000	.000	.000	-.056	.000
	Sig (2-tailed)		1.000	1.000	1.000	1.000	1.000	.783	1.000
	N	27	27	27	27	27	27	27	27
2	Pearson correlation	.000	1	.000	.000	.000	.000	-.056	.000
	Sig (2-tailed)	1.000		1.000	1.000	1.000	1.000	.783	1.000
	N	27	27	27	27	27	27	27	27
3	Pearson correlation	.000	.000	1	.000	.000	.000	0.056	.000
	Sig (2-tailed)	1.000	1.000		1.000	1.000	1.000	.783	1.000
	N	27	27	27	27	27	27	27	27
4	Pearson correlation	.000	.000	.000	1	.000	.000	0.111	.000
	Sig (2-tailed)	1.000	1.000	1.000		1.000	1.000	.581	1.000
	N	27	27	27	27	27	27	27	27
5	Pearson correlation	.000	.000	.000	.000	1	.000	.000	.000
	Sig (2-tailed)	1.000	1.000	1.000	1.000		1.000	1.000	1.000
	N	27	27	27	27	27	27	27	27
6	Pearson correlation	.000	.000	.000	.000	.000	1	0.056	.000
	Sig (2-tailed)	1.000	1.000	1.000	1.000	1.000		.783	1.000
	N	27	27	27	27	27	27	27	27
7	Pearson correlation	-.056	-.056	0.056	0.111	.000	0.056	1	0.056
	Sig (2-tailed)	.783	.783	.783	.581	1.000	.783		.783
	N	27	27	27	27	27	27	27	27
Questionnaire version	Pearson correlation	.000	.000	.000	.000	.000	.000	0.056	1
	Sig (2-tailed)	1.000	1.000	1.000	1.000	1.000	1.000	.783	
	N	27	27	27	27	27	27	27	27

7.4.1 Response rate

A total of 240 questionnaires were distributed to practices (10 of each of the three questionnaires were sent to a total of eight practices). 83 responses were received (34.6%). Although disappointing it is not known how many of the 240 questionnaires were actually handed out by the practices – thus this response rate may not be an accurate reflection of the true response rate.

Of the 83 responses received table 65 (below) gives details of the demographic and clinical breakdown of the respondents. Table 66 (overleaf) gives details of the age profile; the age range was 16 to 87 years (mean age 56.5 years).

Table 65: Demographic and clinical breakdown of respondents

		Number	%
Gender	**Male**	32	38.6
	Female	51	61.4
	Missing	0	0
Age on leaving FT education	**16 y or under**	32	38.6
	17 – 18 years	19	22.9
	19 y or over	27	32.5
	Still in FT education	5	6.0
	Missing	0	0
Work pattern	**Full time**	28	33.7
	Part time	20	24.1
	Retired	32	38.6
	Students	2	2.4
	Unemployed	1	1.2
	Missing	0	0
Health rating	**Excellent**	11	13.3
	Very good	10	12.1
	Good	42	50.6
	Fair	10	12.0
	Poor	5	6.0
	Missing	5	6.0

Table 66: Age breakdown of respondents

	Number	%
<20 years	5	6.0
20 to <30 years	4	4.8
30 to <40 years	3	3.6
40 to <50 years	12	14.5
50 to <60 years	16	19.3
60 to <70 years	24	28.9
70 to <80 years	10	12.1
80 years and over	5	6.0
Missing	4	4.8

7.4.2 Ranking exercise

An additional section to the questionnaires was a sheet (at the beginning) that asked the respondents to list the attributes in order of importance (from one to seven). Frequency analysis (using PASW version 18) of this data revealed that respondents indicated continuity of care (seeing the same person each time) and having time during the consultation as being the two most important attributes to them. How long after their appointment time they were kept waiting and which health care professional they saw were considered to be the least important attributes. The overall order of preference is indicated in figure 3 below.

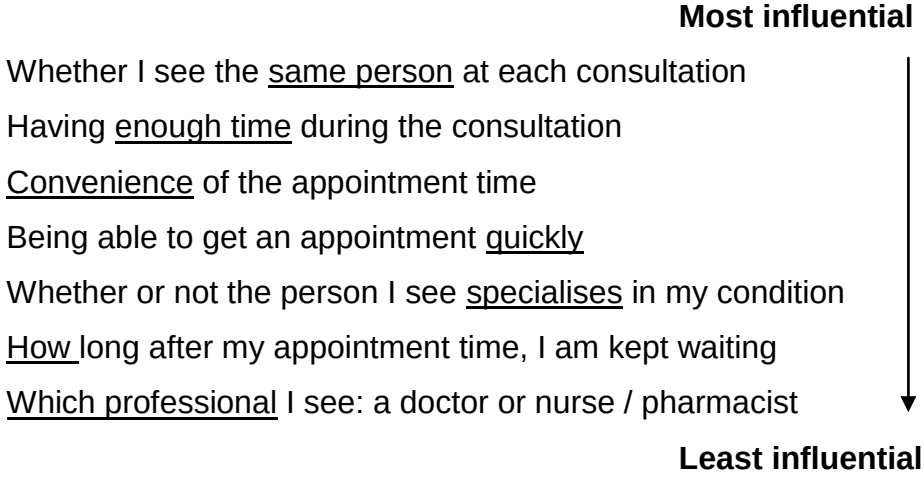


Figure 4: Results of the ranking exercise

7.4.3 Pair-wise choices: trading and non-trading choice patterns

The repetitiveness of the DCE task might deter respondents from reading each set of choices leading to repeatedly making the same choice ("not trading") particularly if one visit option is constant throughout (as in this study). Only one respondent (respondent 79) chose the constant scenario for all choices suggesting respondents could manage this type of questionnaire and that 10 or 11 choices are acceptable.

7.4.4 Pair-wise choices: main effect model and interactions

7.4.4.1 Binomial Logit (logistic (nominal) regression) using MLwiN version 2.14

The result of the MLwiN analysis is detailed below:

$$\text{Logit}(\pi_{ij}) = \beta_{2j}\text{cons} + 0.467(0.594)\text{consult\_20}_{ij} + -0.684(3.013)\text{consult\_30}_{ij} + 2.402(3.034)\text{waiting\_20}_{ij} + 2.368(3.009)\text{waiting\_0}_{ij} + 1.178(3.005)\text{mildly\_convenient}_{ij} + 1.753(3.009)\text{convenience\_ok}_{ij} + 0.736(0.684)\text{seen\_nurse}_{ij} + 2.912(3.036)\text{seen\_gp}_{ij} + 0.917(0.679)\text{met\_oncetwice}_{ij} + 2.084(3.034)\text{met\_always}_{ij} + 1.451(0.762)\text{some\_training}_{ij} + 2.707(3.023)\text{specialist}_{ij} + 1.663(0.792)48\text{hours}_{ij} + 3.073(3.048)\text{today}_{ij}$$

$$B_{2j} = -9.091(9.047) + \mu_{2j}$$

Each of the attributes was measured in comparison with the reference level (i.e. the attribute level allocated "zero"). The main figures (i.e. those outside the brackets) are the beta (β) values, that is, the probability of moving away from the reference values. The beta value predicts the utility (this is explained further below and in table 67). Figures in brackets indicate the standard error (SE) for the utility (beta) value. Ideally the SE should be small relative to the betas (preferably less than half) (Mirella Longo, personal communication). Values that are over half suggest there is a lot of "noise" around the beta i.e. patient responses do not provide a

tight fit, they are scattered, indicating large amounts of variation in responses. For example, the beta value associated with being seen by a nurse was 0.736, with a standard error of 0.684. This would indicate that the actual utility value attached to being seen by a nurse was anywhere between 0.736 +/- 0.684 (i.e. the value lies between 0.052 and 1.420, a wide variation). The only attribute with a standard error less than half the corresponding utility value was being seen within 48 hours (utility value of 1.663, standard error 0.792). Consequently all these results, except being seen within 48 hours, should be interpreted with caution due to the variation in responses.

In table 67 (overleaf) the betas (β) represent the probability of moving away from the reference values and it predicts the utility (if accompanied by a positive sign) or disutility (if accompanied by a negative sign) that the attribute bears. For instance in table 67 the beta values for "*waited 20 minutes"* and "*seen at the allocated time"* are 2.402 and 2.368 respectively. This indicates that any move away from "*waited 60 minutes"* (or, the reference scenario) is preferred by the patients (i.e. bears higher utility) and that the option "*waited 20 minutes"* is (very slightly) preferred to "*seen at the allocated time".* Whilst counter-intuitive it is possible that respondents were actually comparing the attributes with "real-life", rather than as intended. For example, if a respondent usually waits 30 minutes after their allocated appointment time and is rarely seen on time, then it is possible that they are not viewing "*seen at the allocated time"* as a realistic option and "*waited 20 minutes"* may be seen as being preferable to their "norm".

Table 67: Binomial Logit Regression of attributes and study variables on choice of consultation

Attributes	β	SE
Duration of consultation:		
• 10 minute	0	Ref.
• 20 minute	0.467	0.594
• 30 minute	-0.684	3.013
Waiting time to appointment		
• Waited 60 minutes	0	Ref.
• Waited 20 minutes	2.402	3.034
• Seen at the allocated time	2.368	3.009
Convenience of appointment		
• Not at all convenient	0	Ref.
• Mildly inconvenient	1.178	3.005
• Convenient for you	1.753	3.009
Type of professional seen		
• Pharmacist	0	Ref.
• Nurse	0.736	0.684
• GP	2.912	3.036
Continuity of care		
• Never seen me before	0	Ref.
• Seen once or twice before	0.917	0.679
• Know well and usually see	2.084	3.034
Degree of specialism		
• Generalist with no extra training	0	Ref.
• Some extra training	1.451	0.762
• Specialist with particular interest	2.707	3.023
Promptness of appointment		
• Next week	0	Ref.
• The day after tomorrow	1.663	0.792
• Today	3.073	3.048
Constant term	-9.091	9.047

The table above gives some evidence that patients prefer being seen the same day (utility of 3.073) over all the other attributes. This is the most influential attribute in the respondents decision making, and is followed by being seen by a GP (utility of 2.912) and then any HCP who specialises in their condition (utility of 2.707). Finally the duration of the consultation (either 20 minute or 30 minute, with utilities of 0.467 and -0.684 respectively) are relatively less important. The overall relative order of influence in the respondents decision making process (from most to least influential) is summarised in figure 4 overleaf.

Most influential

Being seen on the day	(3.073)
Being seen by a GP	(2.912)
Being seen by any HCP with specialist training	(2.707)
Waiting 20 mins. After the allocated appointment	(2.402)
Being seen on time	(2.368)
Being seen by the HCP usually seen	(2.084)
Having a convenient appointment time	(1.753)
Being seen within 48 hours	(1.663)
Being seen by a HCP with some specialist training	(1.451)
Having a mildly inconvenient appointment time	(1.178)
Being seen by a HCP met once or twice previously	(0.917)
Being seen by a nurse	(0.736)
Having a 20 minute consultation duration	(0.467)
Having a 30 minute consultation duration	(-0.684)[21]

Least influential

Figure 5: Results of the logistic regression using MLwiN (v 2.14)

Using the betas from table 67, sets of scenarios (consultation profiles) may be ranked in order of highest predicted utility. This study contained a total of 27 scenarios. Table 68 overleaf lists the 10 consultation profiles with the highest predicted utilities.

[21] Waiting 30 minutes was a disutility, as indicated by the negative sign. That is, the respondents actively preferred the 10 minute (and 20 minute) consultation. The actual value (0.684) is larger than 0.467 (ie the value for the 20 minute consultation) suggesting it is more influential in their preference BUT this is in the opposite direction (due to the negative sign).

Table 68: 10 scenarios (consultation profiles) with the highest predicted utility

Scen.	Consultation duration	Waiting time (after allocated appoint.)	Convenience of appoint. (to pt.)	Type of professional	Continuity of care (relationship)	Degree of specialism	Promptness of appoint.	Predicted utility
1	20 minutes	20 minutes	Convenient	Being seen by a GP	GP usually seen	Specialist	Being seen on the day	15.398
2	20 minutes	On time (0 minutes)	Convenient	Being seen by a GP	GP usually seen	Specialist	Being seen on the day	15.364
3	20 minutes	20 minutes	Mildly inconvenient	Being seen by a GP	GP usually seen	Specialist	Being seen on the day	14.823
4	20 minutes	On time (0 minutes)	Mildly inconvenient	Being seen by a GP	GP usually seen	Specialist	Being seen on the day	14.789
5	30 minutes	20 minutes	Convenient	Being seen by a GP	GP usually seen	Specialist	Being seen on the day	14.247
6	20 minutes	20 minutes	Convenient	Being seen by a GP	GP met once or twice	Specialist	Being seen on the day	14.231
7	30 minutes	On time (0 minutes)	Convenient	Being seen by a GP	GP usually seen	Specialist	Being seen on the day	14.213
8	20 minutes	20 minutes	Convenient	Being seen by a GP	GP usually seen	Some specialist training	Being seen on the day	14.142
9	20 minutes	20 minutes	Convenient	Being seen by a GP	GP usually seen	Specialist	Being seen within 48 hours	13.988
10	30 minutes	On time (0 minutes)	Mildly inconvenient	Being seen by a GP	GP usually seen	Specialist	Being seen on the day	13.638

From table 68 (above) it can be seen that the optimal scenario for the respondents was the following:

- To be seen on the day (3.073), by their usual (2.084) GP (2.912), within 20 minutes of their allocated appointment time (2.402) at a time convenient to them (1.753).
- To have a consultation lasting 20 minutes (0.467) and for the GP to be a specialist in their condition (2.707).

The overall utility for this optimal scenario is 15.398. This compares favourably with our "assumed" optimal scenario (total utility of 14.213) which was used in the initial design i.e. all the attribute levels coded at level "2" which were assumed by the researcher and academic supervisor to be the preferred best case. In this "assumed" optimal scenario the consultation composed of patients being seen:

- On the day (3.073), by their usual (2.084) GP (2.912). They would be seen at their allocated appointment time (2.368) at a time convenient to them (1.753).
- The consultation would last 30 minutes (-0.684) and the GP would specialise in their condition (2.707).

7.4.4.2 Binomial Logistic (nominal) regression using PASW version 18

To verify the accuracy of the data a stepwise logical regression analysis using PASW (version 18) was also undertaken. In such a regression, parameters (variables) are entered into the model one at a time to assess which, if any, are significant in predicting a change away from the reference scenario (with attribute levels at zero). That is, the stepwise logistic regression assesses if, for example, a 20 minute consultation really is important to a patient's decision making. The likelihood ratio test from the PASW analysis is presented in table 69 and figure 5 overleaf.

Table 69: Likelihood ratio test from the PASW analysis

Effect	Model fitting criteria	Likelihood Ratio Tests		
	-2 log likelihood of reduced model	Chi-square	df	Sig.
Length_of_Consultation_20	97.131	1.262	1	0.261
Length_of_Consultation_30	96.513	0.644	1	0.422
waiting_time_20	131.548	35.679	1	0.000
waiting_time_0	152.131	56.262	1	0.000
Convenience_mildly_inconvenient	102.456	6.587	1	0.010
Convenience_ok	111.901	16.032	1	0.000
Whom_nurse	102.380	6.511	1	0.011
Whom_GP	172.094	76.225	1	0.000
relationship_met_onceortwice	108.611	12.742	1	0.000
relationship_usually_see	124.869	29.000	1	0.000
Skill_level_some_specialist_training	109.951	14.082	1	0.000
Skill_level_specialist	161.323	65.454	1	0.000
Appointment_time_48hours	114.400	18.531	1	0.000
Appointment_time_today	168.966	73.097	1	0.000

The analysis demonstrates that, at 95% confidence intervals, the duration of the consultation (both 20 minutes and 30 minutes) are the only attributes that are not significant (as $p > 0.05$). In addition the SE for these attributes (see table 67) are large. This would suggest that there is a lot of “noise” around these attributes, indicating that respondents may prefer longer consultations but there is little difference between the choice of 20 or 30 minutes.

This analysis indicates the following preference that respondents applied:

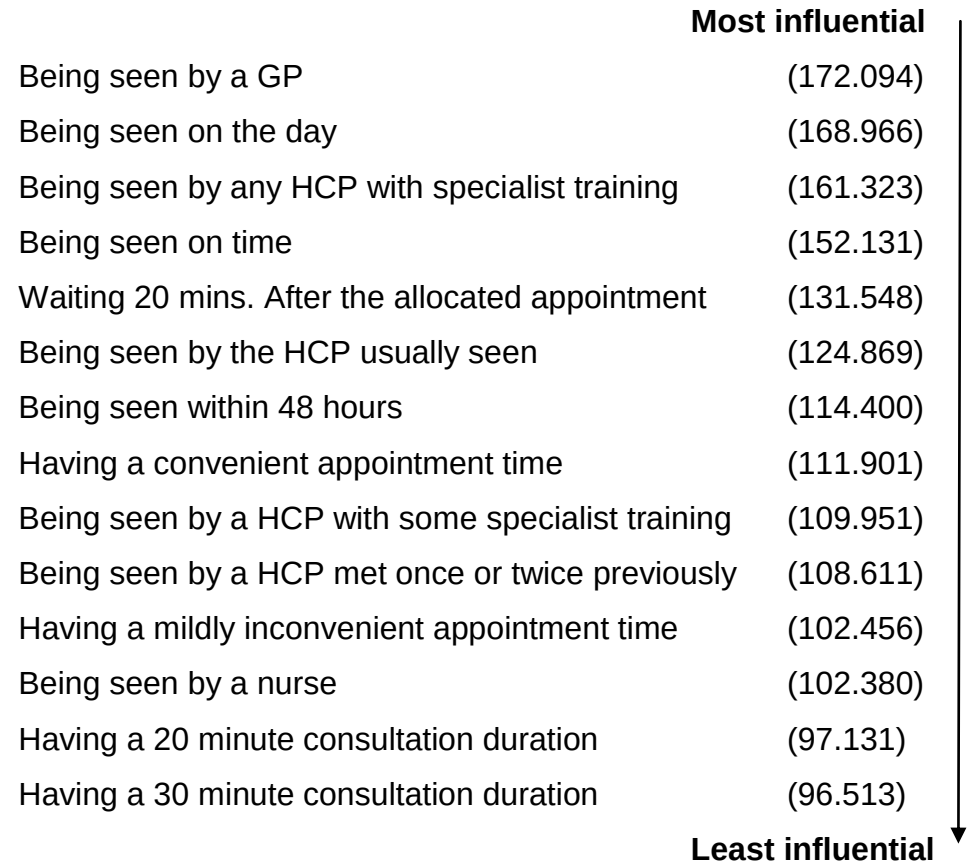


Figure 6: Results of the logistic regression using PASW (v 18)

Direct logistic regression was performed to assess the impact of the seven independent variables (attributes) on the likelihood that respondents would select a scenario other than one containing the reference values (Pallant, 2007). The full model was statistically significant, X^2 (14, N = 858) = 446.492, p< 0.001, indicating that the model was able to sufficiently capture patient preferences. The model as a whole explained between 40.6% (Cox and Snell R square) and 54.5% (Nagelkerke R squared) of the variance in patient response, and correctly classified 79.7% of cases. As shown in table 70 (overleaf) 12 of the 14 independent variables made a unique statistically significant contribution to the model (all except 20 minute (p = 0.296) and 30 minute (p = 0.402) consultation lengths).

The strongest predictor is indicated by the largest odds ratio above one. From table 70 it may be seen that only a 30 minute consultation gave an odds ratio above one (1.280) but this was not statistically significant. Odds ratios less than one indicate respondents are less likely to select the scenario with reference values. The odds ratio of 0.085 for "*appointment time today"* indicates respondents were 0.085 times less likely to select the scenario with the reference value i.e were more likely to select "*appointment time today"*, controlling for other factors in the model. The closer the odds ratio is to zero the more likely the respondent is to select that attribute value. With an odds ratio of 0.097 "*being seen by a GP*" was the next attribute to result in respondents moving away from the reference value. The order is determined by the increasing values of odds ratios less than one (see table 70 overleaf).

Table 70: Logistic regression predicting likelihood of selecting a scenario other than the one containing the reference value

							95% CI for odds ratio	
	B	SE	Wald	df	p	Odds ratio	Lower	Upper
Length_of_Consultation_20	-.242	.232	1.094	1	.296	.785	.498	1.236
Length_of_Consultation_30	.247	.295	.702	1	.402	1.280	.718	2.282
waiting_time_20	-1.720	.310	30.744	1	.000	.179	.098	.329
waiting_time_0	-1.932	.286	45.576	1	.000	.145	.083	.254
Convenience_mildly_inconvenient	-.808	.290	7.773	1	.005	.446	.252	.787
Convenience_ok	-1.141	.289	15.617	1	.000	.320	.181	.563
Whom_nurse	-.649	.271	5.741	1	.017	.522	.307	.889
Whom_GP	-2.329	.296	62.058	1	.000	.097	.055	.174
relationship_met_onceortwice	-1.010	.275	13.518	1	.000	.364	.213	.624
relationship_usually_see	-1.463	.298	24.136	1	.000	.232	.129	.415
Skill_level_some_specialist_training	-1.091	.284	14.730	1	.000	.336	.193	.586
Skill_level_specialist	-2.086	.282	54.785	1	.000	.124	.072	.216
Appointment_time_48hours	-1.535	.302	25.853	1	.000	.215	.119	.389
Appointment_time_today	-2.461	.303	65.742	1	.000	.085	.047	.155
Constant	7.132	.743	92.241	1	.000	1250.951		

The final output from the PASW analysis (the case wise list) gives information about cases (or respondents) for whom the model does not fit well. Cases with ZResid values above two are listed in table 71 below (respondents 59, 71, 291, 412, 528, 747, 786, 833).

Table 71: Case wise list for cases that do not fit well within the model

Case	Observed (A or B)	Predicted	Predicted Group	Resid	ZResid
59	A	.861	B	-.861	-2.491
71	A	.978	B	-.978	-6.646
291	A	.978	B	-.978	-6.646
412	A	.978	B	-.978	-6.646
528	A	.861	B	-.861	-2.491
747	B	.017	A	.983	7.507
786	A	.861	B	-.861	-2.491
833	B	.017	A	.983	7.507

Cases with values above 2.5 (or less than -2.5) should be examined more closely as these are clear outliers (given that 99% of cases will have values between -2.5 and +2.5) (Pallant, 2007). It was therefore decided to assess if these cases occurred with certain groups of respondents. Details of these outliers are presented in table 72 overleaf, no association between outliers and demographic characteristics was found.

Table 72: Specific details for cases that do not fit well within the model

Case	Respondent	Q'naire	Question	Gender	Year of birth	Age	Age left FT educ.	Work	Med. Cond.	Medication (no.)	Health status
59	6	2	8	F	1985	25	19+	FT	0	N	Excellent
71	7	2	8	M	1992	18	Student	Student	0	N	Excellent
291	28	2	8	F	1954	56	19+	PT	0	N	Good
412	39	2	8	M	1931	79	17 or 18	Retired	3	Y	Fair
528	50	2	7	F	1960	50	16	FT	0	N	Very good
747	71	1	10	M	1923	87	16	Retired	4	Y	Poor
786	75	2	7	M	1992	18	17 or 18	FT	1	N	Good
833	79	3	11	F	1960	50	16	FT	0	N	Fair

7.5 Summary

There was little difference between the order of preference whichever of the two analyses were used (MLwiN or PASW) (as summarised in table 73 overleaf). However there was a marked difference between the results of the DCE (whichever analysis was used) and the results when respondents were asked to list attributes in order of preference (the ranking exercise). This indicates there may be significant differences between patients' stated (ranking) preferences and their actual (choice) preferences. A summary of the order of preferences for each of the three outcomes (stated preferences, MLwiN analysis and PASW analysis) is presented in table 73 overleaf.

Table 73: Summary of preferences

MLwiN analysis	PASW analysis	Stated preferences
MOST INFLUENTIAL PREFERENCE		
Being seen on the day	Being seen on the day	Whether I see the same person at each consultation
Being seen by a GP	Being seen by a GP	
Being seen by any HCP with specialist training	Being seen by any HCP with specialist training	Having enough time during the consultation
Waiting 20 mins. After the allocated appoint.	Being seen on time	
Being seen on time	Waiting 20 mins. After the allocated appoint.	Convenience of the appointment time
Being seen by the HCP usually seen	Being seen within 48 hours	
Having a convenient appointment time	Being seen by the HCP usually seen	Being able to get an appointment quickly
Being seen within 48 hours	Having a convenient appointment time	
Being seen by a HCP with some specialist training	Being seen by a HCP with some specialist training	Whether or not the person I see specialises in my condition
Having a mildly inconvenient appointment time	Being seen by a HCP met once or twice previously	
Being seen by a HCP met once or twice previously	Having a mildly inconvenient appointment time	How long after my appointment time, I am kept waiting
Being seen by a nurse	Being seen by a nurse	
Having a 20 minute consultation duration	Having a 20 minute consultation duration	Which professional I see: a doctor or nurse / pharmacist
Having a 30 minute consultation duration	Having a 30 minute consultation duration	
LEAST INFLUENTIAL PREFERENCE		

Key findings from the analyses demonstrate that whilst the respondents stated that continuity of care ("*whether I see the same person at each consultation*") was the most important attribute (of the seven) to them, in reality, when presented with two scenarios they were willing to trade this attribute for: being able to get an appointment quickly (being seen the

same day), being seen by a GP, being seen by any HCP with specialist training in their condition or being seen on time (not having to wait past the allocated appointment time). Similarly whilst they stated that "*having enough time during the consultation*" was another important attribute to them, in reality, when faced with the scenarios, they were willing to trade having 20 or even 30 minute appointments for every other attribute. Longer appointments did not appear to be high on their priorities. Finally the respondents stated that they did not mind "*which professional I see: a doctor or nurse / pharmacist*" however in reality seeing the GP was one of the most influential factors in their decision making process (possibly second only to being seen the same day). It would appear that what respondents state as being their most influential preferences, when accessing primary care services, are not always demonstrated to be their selected preferences when presented with different scenarios in the form of a DCE. This is, of course, subject to the limitations of the DCE scenario. In addition it is not clear how either their stated preferences or their selected preferences compare with their actual preferences in "real-life".

These findings and those from the other two phases of the research will now be considered in the next chapter.

Chapter 8: Overall Discussion and Conclusion

8.1 Summary of findings

This study focused on patient and professional views of service re-design in primary care. It encompassed how services may be developed and delivered to be more patient centred and how to optimise capacity without compromising quality of care. In this sense it considered both the organisational / structural and service quality aspects of care. It was undertaken at a time of rapid, and quite radical, change within the NHS – with the publication, and implementation, of several Government policies. The key driver for these policies was the publication of the DH document, "The NHS Plan: a plan for investment, a plan for reform" (Department of Health, 2000a). The study utilised a combined qualitative and quantitative approach.

After the initial introduction and literature review in chapters one and two, chapter three outlined the method for phase one of this programme of work – the qualitative phase. The direction of travel of health policy at the time of this research involved the re-engineering of services to provide a more efficient and effective health care service delivery. Another key theme was to place the patient, as the service user, at the focus of the service, rather than the service provider as was the more traditional approach. As within any project or service, delivery of a more cost effective service has inextricable links with both time and quality (cost, time and quality often being referred to in project management as the "scope triangle" (Jenkins, 2011)). As delivery of a cost effective service was important, attitudes towards time and quality would also be of prime importance. Consequently, two separate, but related, semi-structured interview guides were developed to elicit broad views on these areas. One guide was for interviews conducted with patients and one for those conducted with health care professionals - GPs, practice-based pharmacists, practice nurses and practice managers. Interviews were conducted and subsequently analysed, through modified grounded theory, to elicit and refine key themes. The HCP and patient transcripts were analysed alongside one another so that a single broad coding

framework could be developed. The framework encompassed comments / statements that were both critical and supportive of the identified themes.

The emerging themes were discussed in chapter four. The topics that generated the most wide ranging discussions were, for the HCPs, non medical prescribing (including roles and responsibilities and skill mix such as generalism versus specialism), chronic disease management and continuity of care. These latter two topics were particularly interesting when considered during the “out of hours” (weekend and evening) period and with respect to frequency of visits (i.e. whether a patient should be treated holistically and have all their conditions managed in a single visit or whether each condition should be managed as a separate entity). The QOF also produced some interesting points of debate, in particular that it could be perceived to be operating contrary to the health policy ideals of a patient-centred approach to consultations.

For patients the most wide ranging discussions were centred on time (consultation duration, convenience and promptness of appointment times and waiting times), continuity of care and shared decision making / patient centredness. The topics that identified perhaps the most significant mismatch in views between the patients and professionals (and also with existing literature) were time, patient-centred care and continuity of care. In terms of time the issue appeared to focus around what each group perceived to be the most appropriate allocation of time in primary care (and how this time is divided between that spent waiting for the consultation and the duration of it) and whether it is the patient or health care professional that wants more time. It appeared that it was the HCPs, rather than patients, who require more time during the consultation but that being seen on the day was important to patients. Whilst patients stated that having enough time in the consultation was important to them, in reality they were willing to trade having 20 or 30 minute consultations for all other attributes used in eliciting their preferences for type of consultation (that is, type of professional, waiting time, promptness of

appointment, continuity of care, specialist training of the HCP and convenience of appointment time).

In terms of patient centred care, there were some disparities between how patient-centred the patients felt their consultations were and how patient-centred the professionals (particularly the GPs) felt their consultations were. The GPs perceived that their consultations were more patient centred than the patients indicated they were. There was, however, broad agreement between the two groups that consultations were more patient-centred now than a decade or more ago. Discussions on continuity of care demonstrated differences in perceptions of what constituted continuity of care. In particular whether continuity was afforded by contact with the same HCP for all conditions (as the GPs felt was important), or whether continuity was actually seeing different HCPs for each condition (depending upon specialism) albeit the same HCP for each individual condition, which was what some (not all) the patients considered afforded continuity of care. Between patients there were differences in opinion with respect to whether continuity of care was, or was not, important for acute (rather than chronic) presentations and which HCP (in particular the GP or the nurse) it was appropriate to consult for either an acute or chronic presentation. These latter areas were not explored with the HCPs.

It was considered that these themes, and the spectrum of opinion associated with them, warranted further investigation across a broader representation of the population – both HCPs and patients. Two separate, but linked, Likert scale based questionnaires were thus developed from the nine *a priori* themes generated from phase one. In the HCP sample, factor analysis was also undertaken. The factor analysis approach takes a large dataset and reduces it to smaller sets of factors or components (Pallant, 2007). The process of exploratory factor analysis generated five components. These were:

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i. Weekend working
ii. The QOF

iii. Benefits of generalism
iv. Benefits of specialising
v. Clinical responsibility

Each component was further investigated for areas of commonality and divergence between the three professional groups and to elicit differences in responses between variables such as gender, age, employment status (full or part time), professional group and prescribing status of respondents (i.e. whether or not the HCP was qualified to prescribe, either as a GP or a NMP). This process is described in more detail in chapter six of this thesis and the emerging themes will be discussed later in section 8.3.

Unfortunately, due to a variety of factors, the patient arm of this phase produced a disappointingly low response rate thus analysis was able to focus upon descriptive findings only. This demonstrated that the majority of patients felt that Friday through Monday was a long time to wait without being able to see their doctor. The majority also wanted to be seen on a day suitable for them and wanted to be seen on time. Finally the majority expressed a preference for open access services for “serious” problems and also for having all their conditions dealt with in a single visit. Approximately equal numbers expressed a preference for continuity of care for routine or minor problems versus being seen by any HCP with appropriate training.

The third, and final, phase of this programme of work utilised a “Discrete Choice Experiment” (DCE) to identify the trade-offs, for patients, when accessing primary care services. The method and findings for this phase were described in chapter seven. This final phase considered seven attributes (also known as utilities) identified within the initial qualitative phase as being of importance to patients. These seven utilities were:

i. Consultation duration

ii. Waiting times (i.e. how long after the allocated appointment time a patient is prepared to wait)
iii. Convenience (to the patient) of the appointment time
iv. Type of professional the appointment is with
v. Continuity of care
vi. Degree of specialism
vii. Promptness of appointment (access to the HCP)

The DCE phase indicated that there are differences between patient's stated choice of service (that is the order of preference when asked to "rank" the seven attributes) and their selected preferences as generated from the DCE. These differences will be expanded upon in section 8.3.

The current environment within the National Health Service (NHS) is one of significant and unprecedented change, making this research particularly timely. Government health care policy is focusing on more effective and efficient use of resources, in order to meet the ever increasing demands on the service, as well as trying to shift the delivery of the service from one that is predominantly service provider driven to one that has a greater service user focus. This work has provided some insights into patients' and professionals' perceptions of current health policy and new ways of working, including what areas are important to each of them and a potential mismatch of views between the two groups in some aspects of service provision. These areas are discussed further in section 8.3.

This chapter will now go on to consider some of the limitations to this programme of work (section 8.2) as well as discussing in greater depth the dominant themes (section 8.3). The wider implications for policy and practice (section 8.4) and suggestions for areas of future work (section 8.5) will also be considered.

8.2 Limitations

With the benefit of hindsight it was felt that the early focus of this thesis concentrated too much upon the views of the HCPs rather than patients – this then shaped the programme of work. Having revisited phase one there was a great deal of useful and interesting patient data that was not used. Within the climate of the "new" patient-led NHS it may have been useful to focus upon slightly different areas and prioritise patient views and opinions more highly. In addition, as this work developed so too did the researcher. The consequence of this is that, as the main researcher, I now feel more comfortable challenging and exploring patient views than I did during the early part of this programme of work.

In all three phases of this programme no attempt was made to conceal the researcher's pharmacist status from patients. This may have influenced some responses. It became clear very quickly, in phase one, that the majority of patients had little understanding of the potential new roles for pharmacists in particular. When there was a reference to a pharmacist an assumption was often made (by, in particular, both the GPs and patients) that this meant community pharmacists only. In the interests of consistency it was decided appropriate to continue without concealing the researcher's professional identity. Due to the use of letterheads, all participants were aware that the research was being conducted by the School of Pharmacy and Pharmacology at the University of Bath. Knowing the professional background to the researcher, and project, may have influenced participants to respond more favourably towards this profession than they may have otherwise done.

In each phase GP partners were asked to exclude patients they did not feel it was appropriate for the interviewee to approach. There was no guidance or standard criteria applied to these exclusions, it was left to the discretion of the individual GP. It is possible that GPs may have either applied different exclusion criteria or deliberately excluded patients they felt would give an inappropriate response or opinion. As this was a qualitative study covering a range of ages, genders and populations it was

considered that a range of views and opinions would still be revealed. The first stage was intended to reveal diversity of opinion on the subject areas of interest. A limitation of the study may have been that true diversity with regard to the range of views on the subject areas of interest may not have been obtained due to patient selection bias by the GPs – this could have potentially influenced the assumptions and utilities selected for the following phases.

Resources did not allow translation of the questionnaires into multiple languages. Unfortunately this meant the study excluded those that did not understand enough English to be able to respond to the questions and thus excluded some populations. In addition, from the patient's perspective, there was a skew in respondents towards retired populations – presumably because they have more time to respond. However when discussing the appropriateness of consultation times and how long a patient is prepared to wait, this may bias response. In addition, those that are more politically active tend to be more likely to respond. Consequently minority and difficult to access groups (such as young men) were under represented.

8.2.1 Limitations to Phase 1

There were a significant number of changes – both in terms of implementation and consultation – within the NHS throughout this study. It was not clear all HCPs were aware of the extent of these health policies thus, in some cases, a lot of the questions were too probing and the HCP had not really had the opportunity to formulate a specific opinion. Some HCPs did not appear to have a general overview of the direction of travel of the NHS. A more extensive initial pilot and / or for the HCP to have viewed the topic guide prior to interview may have provided a more considered interview. With so many complex areas to discuss the questions were quite difficult to formulate a quick response to. The disadvantage with a HCP viewing the guide prior to interview was the possibility of leading them towards a response from the popular or medical press rather than formulating their own opinion based upon

experience. In addition to the above the pace of change within the NHS was rapid. As fast as HCPs appeared to be grasping new concepts they had to move on. Such a rapid pace of change made consistent questioning, over a relatively long period of data collection, difficult.

All three practices were relatively well known to the interviewer thus there may have been a selection bias and / or a response bias, with respondents offering opinions possibly tempered by what they felt the interviewer wanted to hear. Familiarity with the practices, however, may have been an advantage. As the interviewer and interviewees were well known to each other the interviews were not formal. The interviewees were relaxed, and thus were more likely to give a full and honest response rather than one which they felt would be politically correct or expected of them.

The researcher did not feel the earlier interviews were conducted to as high a standard as the latter ones. The process of learning interview techniques resulted in an inevitable variation in quality. It was considered advantageous that the interviews improved however disadvantageous that they changed. In addition no recording of observed non-verbal body language, or other field notes, were kept during the phase one interviews. It is possible that, had such behaviours been recorded, these may have enriched the initial data by providing further insight into what the interviewees were trying to express. Other field notes such as venue for the interview (e.g. whether the interview was conducted in the patient's own home, at the surgery or at the patient's workplace) may have also supplemented the quality of the data.

A further limitation to phase one of this research was that patients were not keen to appear too critical of their care. Despite assurances (both verbally at the start of the interview process and within the patient information sheet) that the study was completely anonymous and the GPs were not aware of which patients had / had not responded to a request for participation, the patients always referred negative experiences to those

of friends or relatives rather than themselves. This may have been linked to a potential GP selection bias, as outlined above. It may also have been as a result of concerns regarding a potential breakdown in the GP-patient relationship or an effect on personal, clinical care if the patient appeared too critical.

Due to requirements of the ethics committee an “opt-in” approach was adopted for the initial patient selection. This approach to participant recruitment has been demonstrated to produce lower response rates and a biased sample (“opt-in” approaches being associated with a sample of healthier participants) than “opt-out” studies (Junghans et al., 2005).

8.2.2 Limitations to Phase 2

The second phase was designed to investigate the extent to which the views, expressed in phase one, were shared more widely in the population. This may have been limited by the potential patient selection bias in phase one. In addition there were relatively few RA patients, thus views of patients with chronic and symptomatic conditions requiring quite intensive monitoring (and hence increased frequency of visits) may also have been limited.

The HCP questionnaire was both lengthy and complex. This may have contributed to a poorer response rate than had it been shorter and easier to complete. However, upon review, it was decided that all the questions were relevant and thus a decision was made to retain it at this length. This may have resulted in only those HCPs with more time and / or a particular interest in the subject area responding, thus biasing the responses. Although not as lengthy the patient questionnaire was similarly complex. As such it was more likely to have been completed by a group of patients that would be expected to be well motivated and organised. Such a group may be expected to be quite focused in terms of their organisation of time and, for example, in arranging and planning appointments. Views may, therefore, not be representative of the wider population.

Both the gender and work pattern (full-time or part-time) of the respondents in this phase appeared to be skewed by the number of male GP respondents. It is likely therefore that views expressed relate to a GP biased response rather than a gender (or work pattern) response. Results from this phase may therefore also be skewed and not indiciative of the wider population. A further problem with the HCP questionnaire was that the demographic data section contained a question relating to the geographical area in which the respondent worked. One of the responses to this question was “varies”. Unfortunately this was found not to be specific enough for the pharmacist respondents. As the pharmacists were selected from across three regions, for the four pharmacists that selected the “varies” as a location it was not clear whether the location in which they worked varied between the three regions or varied between practices that were all contained in one of the regions. It would have been better to have used a reference to the main place of work only. As the demographic data only formed a minor part of the questionnaire this was not considered too much of an issue.

8.2.3 Limitations to Phase 3

Stepwise regression procedures (both multiple and logistic) have been criticised because they can be heavily influenced by random variation in the data, with variables being included or removed from the model purely on statistical grounds (Pallant, 2007). In addition the sample size was small and there were a large number of predictors thus the solution may fail to converge and demonstrate statistical significance (Pallant, 2007). As there was no specific definition of what constituted a generalist and what constituted a specialist, patients may have placed different interpretations on this, either individually or in relation to the definition a HCP may apply. This also brings into question how realistic the scenarios actually were to patients. In particular it was not clear if many (indeed any) of the patients had been exposed to pharmacist or nurse prescribers – a practice that is not particularly well supported locally. Even if the patients had had experience of non-medical prescribing it is unlikely that this exposure would have been significant. It is therefore unlikely that the

patient would have seen them regularly, over a prolonged period, and been able to develop a rapport with them. They would probably not know them as well as they might their GP which may have influenced responses in terms of continuity of care. It was apparent, from phase one, that there was confusion when the prescribing role of the pharmacist was mentioned. Many of the patients confused the prescribing role with that of their dispensing role suggesting responses may not be as meaningful.

Analysis of the responses indicated that more responses were received for questionnaire versions one and two than were received for version three. Each batch of questionnaires was sent to the practices in piles of 10 i.e. the 30 questionnaires were sent as ten of version one, then ten version two then ten version three on the bottom. With hindsight it may have been better to alternate each questionnaire so that 10 batches containing questionnaire version one, then two then three were sent out. It is possible that some of the practices did not hand out all 30 questionnaires. If this was the case it was always questionnaire version three that was on the bottom and thus it is possible fewer of these questionnaire versions were distributed.

The demographic data contained an omission in that there was no “unemployed” box next to the employment status. It is possible that some respondents did not respond to this question due to this oversight. However, as there was relatively little missing data, this was not considered significant.

Despite these limitations, there were a number of emerging themes which will be discussed in the following section (section 8.3). The wider implications of these themes for both policy and practice will then be discussed in section 8.4 and suggestions for future research in section 8.5. The final section (8.6) will provide an overall conclusion.

8.3 Emerging themes

The single, most important, finding of this programme of work centred around time – including waiting times, access times and consultation duration. Whilst there were several other key findings, ultimately, these all related to time or appeared to have a connection with it. The initial literature searches revealed a plethora of literature that concerned time, and the use of it, in primary care (Commonwealth Fund, 2000; Airey & Evans, 1998; House of Commons Social Services Committee, 1987). A number of these papers suggested that patients, in particular, wanted more time in consultations (Ogden et al., 2004; Roland, 2002). To support this some studies suggested that longer consultations led to improved quality (Howie et al., 1999; Freeman et al., 2002) and other potential benefits, such as lower prescription rates (Wilson, 1985). Other papers suggested that longer consultations would always lead to improved outcomes, simply due to the increased duration inevitably containing more aspects of care that were important to the patient (Wilson and Childs, 2002). Some questioned whether or not increased consultation durations were necessary (Jenkins et al., 2002). This study also questions whether or not more time is required, in particular whether or not it is patients who want more time with their doctor or the other way around.

In the initial, qualitative, phase many of the HCPs interviewed expressed concerns suggesting consultation durations were becoming inadequate and would need to be extended. Reasons included the increased complexity of patients' conditions, increased paperwork (implementation of the QOF was one reason cited for this) and, in line with principles one and two of the NHS Confederation's response to the Government's White paper "Our Health, Our Care, Our Say" (Department of Health, 2006c), patients' expectations that all their needs should be met in the minimum number of encounters. In addition to this, it was acknowledged that consultations invariably ran over time with the subsequent effect that patients were kept waiting beyond their allocated appointment time (another issue also highlighted within principle one of the previously

mentioned White paper: "*Patient's time is not free..... Appointments should take place at the agreed time"*).

Interestingly there was a view that ultimately the HCPs, in particular the GPs, retained control over the duration of the consultation as they had control over ending the consultations. If HCPs consider they control the length of the consultation and the consultations run over then they must run over because the HCPs allow them to. This could be because patients really are significantly more complex, that the HCPs are unsuccessful in ending the consultation, or, that the HCPs choose not to end the consultation. This could imply that it may be the HCP who requires more time with the patient rather than, as suggested by the research listed above (Ogden et al., 2004; Roland, 2002), the other way around. This hypothesis is further supported by the evidence that some patients self impose time restraints (Pollock & Grime, 2002) in order to relieve the burden they perceive the GP to be under. Extrapolating this latter idea further, if it is the HCP that controls the consultation duration and patients do self impose time limits it could be hypothesised that, in allowing consultations to over run, the HCP is either consciously or sub-consciously keeping the waiting room busy. Waiting patients will realise they are busy and as such will self limit the duration of the consultation because "I can see you are a busy doctor". This makes the HCP's job easier because they don't actually have to end the consultation.

Within health care there appears to be an assumption that patients will wait beyond their expected appointment time. In many health care settings this has become expected practice. In this study the length of time a patient waited, after their allocated appointment time, was not mentioned by HCPs (although it was not specifically probed either). They appeared to accept that patients would wait. Whilst not a particularly patient-focused approach for the patient kept waiting (and hence is contrary to the Government ideals) it could be considered so for the patient the HCP is concentrating upon seeing, as they may be receiving an extra long consultation. However, as indicated in the NHS

Confederation paper, patient's time is not free. It would be interesting to investigate what would happen to consultation durations if patients were seen at the agreed appointment time and whether or not patients apply their own "rules" around total time they are prepared to spend in the practice. There may be an attitude that thinks "I've already waited here "x" amounts of minutes, therefore I will try and get through this as fast as I can". On the other hand, they may want a longer consultation because they have waited and want to get "their money's worth".

Patients may perceive their time not only in terms of time spent with the professional (actually in the consultation) but also in terms of the time spent waiting. What is not clear is whether or not they value both allocations of time equally and whether or not there is a limit to how much overall time they are willing to spend in the practice. If they are kept waiting longer they may prefer a shorter consultation because they will be approaching the total time they are willing to allocate. If they knew they were going to be seen at the appointment time they may actually want more time because the waiting room would be less busy and thus they would be less likely to self impose time restraints. In phase three of this programme of work, it appeared that patients preferred to wait for 20 minutes after their allocated appointment time over not waiting at all. This seems to be counter intuitive. However, it is possible that patients do really prefer this as it affords them the opportunity to prepare their thoughts and structure what they want from the consultation, or that patients have already factored this waiting time into the total time they are prepared to spend in the practice. It could be that they are so accustomed to having to wait that they did not consider being seen on time as a realistic option.

The fact that it may be taken for granted patients will wait beyond their allocated appointment time, as well as the potential conclusion that it is the HCP who controls the consultation length, supports the view of the "*doctor-centred approach*", suggesting that traditional paternalistic attitudes do still persist. In some respects the open access system (where

there were no allocated appointment times, patients arrived and added their name to a list to be seen by the next available GP) gave the responsibility to the patient to decide if they were willing to wait or return another day. Work in nurse practitioner clinics, from the US, on similar schemes (Cole et al., 2001) suggests that there is no statistically significant relationship between waiting times and satisfaction with service and / or care received. The work by Cole et al. suggested that it was increasing patient expectations (for example by allocating a time when the patient could be expected to be seen) and then not delivering on this that reduced satisfaction. This study would therefore support the use of open access clinics in improving satisfaction – or at least not increasing dissatisfaction. However, nationally in England, the open-access scheme has recently been down-sized with less importance placed upon it. One of the factors for this was that some people do not want open access. They prefer to plan and make an appointment suitable to them (as demonstrated in phase two of this study). However, a contributing factor to this could be that open access gave patients the "power" to decide for themselves. This transfer of "power" from the GP to the patient may be considered, by some, an erosion of the power held by doctors.

A further principle (principle four) from the NHS confederation was that patients should be able to set their own consultation length. Within the context of this study the HCPs did not agree with this. Reasons cited suggested this would not be appropriate as patients wouldn't know how long something took, consequently they wouldn't know how much time was required. However, excepting such things as routine chronic disease management, generally HCPs do not know what the patient's presenting complaint is prior to their presentation. In reality it could be anything from a relatively common and straightforward presentation to a complex mental health issue that required a significant amount of time to listen, discuss and unravel exactly what the issues are. Consequently, it could be argued that the HCP would not know what needed to be done prior to the presentation, therefore they would also not necessarily know how long something would take. Yet practices usually have pre-set appointment

durations. There would appear to be a double standard here, one for doctors (who don't know what is coming but can control appointment length) and one for patients (who also don't know what will be needed but can not control appointment length).

In some respects the above views contradict the ideals behind the "Expert Patient Programme" (EPP). One of the premises of this national policy (Department of Health, 2001b) was that although a patient may not have the clinical and / or technological expertise in their particular condition(s), they were actually experts on themselves and how the condition(s) manifested in them. This was supported by one of the patients in phase one: "*..if it says rheumatoid arthritis on my notes it doesn't really describe what it is like because it is not like "normal" rheumatoid arthritis...".* It could therefore be hypothesised that actually some patients, those who understood their own condition well, may have an idea as to how long a consultation they require. Having stated the above it should also be noted that there was some evidence, from the GP interviews, that there could be flexibility in allowing some patients to set their own consultation. There was limited evidence that sometimes a patient could book a double appointment if they felt their condition warranted this length – some GPs stated that they occassionally informed reception staff that certain patients should be allowed to book double appointments. This was not, however, universal and the issue was not explored further.

In contrast to what principle four (above) stated, within this study most patients did not want to set their own consultation length. Sometimes this was because they agreed with the HCPs that they would not know how long a procedure required, however, sometimes it was that actually they liked the idea in principle but were not keen on the associated responsibility. This could be because they did not want the responsibility of "getting it wrong" in case this, in some way, affected their health outcomes, their care or even their relationship with the HCP. To some extent this is supported in the literature by Longo et al. (2006) who found that patients liked to have choice but didn't like to choose – they liked the

principal but not the reality. It is also possible that patients do not want to set their consultation duration because they know, or sense, that the GPs do not want them to do this. They may be concerned that in doing something the doctor does not want, it will somehow upset their relationship with the GP and / or practice and possibly affect their care in some way. There is evidence in the literature to suggest that patients view their GPs, in particular, in high esteem and do not like to challenge or upset them (Kmietovicz, 2002) – further enforcing the idea that power lies with the doctor. Within this study an attitude of "*that's how it is*" and "*what else can you do?"* prevailed. Such attitudes reinforce hierarchy and do not challenge medical dominance. In addition this also suggests that although the service re-design is, at least in part, concerned with designing services around the patient, patients do not always wish to challenge or change things. They may like the idea of change but may not wish to act upon it. This does question whether we should continue with re-designing the service around patients, from this study it is not clear that this is what patients actually want. Some patients, at least, appear to like the option of choosing but really do not wish to "*rock the boat*".

Probing in phase one revealed that the majority of patients considered that sometimes time was short in their consultations. They felt pressurised by time constraints and considered that they did not always have sufficient time to ask everything they intended to. What is not, however, clear is what the impact of having more time and asking more questions would have on their health outcomes. The patients may have a stated preference for more time and this might make them feel more valued, however, it may not actually improve their overall health outcomes. There did appear to be differences in how patients valued time between different groups, in particular between those that worked and those that did not. Several of the interviewees made statements such as, *"it would have been important when I did work, but now that I am retired.....".* There was however a population skew due to the number of retired respondents.

The evidence surrounding whether or not consultation duration is the most important, or even the only, factor in deciding the quality of consultations is variable. However an interesting debate, regarding time, concerns the different kinds of time (Innes and Skelton, 2005). Innes and Skelton suggested that time actually consisted of three facets: clock-time (i.e. that which can be objectively measured), “I-time” (the patient’s perceived time) and “subjective-time” (or the way time varies with emotional states such as boredom, suffering, pain or novelty). This is supported by the work of Cape (2002) who suggested that although lack of time was often cited as a concern for patients, measured consultation duration was not associated with patient satisfaction. His work demonstrated that consultations where patients stated higher levels of satisfaction appeared to the patient to have lasted longer (greater “I-time”) but in reality were not actually longer (“clock-time”). Thus there was another facet to the consultation that was more satisfying to the patient and this appeared to make them feel like they had received more time than they actually had. Some evidence from discrete choice experiments (DCE) (Longo et al., 2006) suggests that patients may value other attributes, such as feeling listened to and valued, over duration of the consultation. Feeling listened to and valued could make a consultation feel longer through increasing the “I-time”.

This is also supported by the work of Marvel et al. (1999). In this work, the researchers demonstrated that if patients were permitted to express all their concerns uninterrupted then there were less likely to be late-arising concerns and fewer missed opportunities for gathering important information. Consequently the needs of the patient would more likely be met and thus, it could be hypothsised, satisfaction increased. Such consultations were more patient-focused than service provider focused. A patient centred approach increases patient enablement and satisfaction and may reduce symptom burden and referral rates (Little et al., 2001). Similarly it has been demonstrated that patients attend consultations with a set agenda, failing to address that agenda may adversely affect the outcome of the consultation (McKinley and Middleton, 1999). The work by

Marvel et al. (1999) also demonstrated that such consultations only lasted, on average, six seconds longer than the consultations where patients' initial concerns and descriptions were interrupted and redirected. This suggests that the issue is not time per se but quality of time. Perhaps, rather than looking at increasing the length of the consultation, more attention should be focused upon increasing the quality of the consultation. Giving patients more "I-time" rather than more "clock-time".

In phase two there was a consensus that GPs could meet all the health care needs of an individual patient (question 39, HCP questionnaire). However, nearly all HCPs (84.9%) also felt that it was becoming necessary to establish a multidisciplinary team approach (question 48, HCP questionnaire). In addition it was felt that a single individual should co-ordinate delivery of complex care needs to a patient, but that this did not necessarily need to be a GP. If it is acknowledged that a GP could manage all the health care needs of an individual, but it is felt a team approach is more appropriate, then it is not their clinical knowledge and skills in managing the individual patient that are lacking. Thus the need for a team approach must be down to something else. It could be that it is time that is lacking (i.e. relief of workload) and driving the perceived need for a team approach. Research by Richards et al. (2000) suggests that multi-professional team working, with more equitable and less hierarchical models of delivery, need to be implemented if the vision for a primary care led NHS is to be realised. Yet there is still evidence, from this work, that hierarchical models persist. Despite the introduction of non-medical prescribing and much talk surrounding skill-mix, generally speaking the model of the GP at the centre of healthcare still appears to persist.

When non-medical prescribing (NMP) for nurses and pharmacists was first mooted the press furore regarding responsibility for signing prescriptions was almost unprecedented. Despite this, almost a decade on this study has demonstrated that GPs still consider it acceptable practice to sign a prescription for a patient that they have not personally assessed ("*prescribing by proxy"* (Bradley et al., 2005)). This would imply

that it was something other than the signature on the prescription that was at stake with the introduction of non-medical prescribing. Studies have suggested that it was the potential loss of hierarchical status, and non-medical prescribing's potential challenge to medical dominance, that was actually at the root of the furore (Weiss & Sutton, 2009). This study, and other recent publications (Cooper et al., 2011), further reinforces this suggestion as a possibility.

The work by Cooper et al. (2011) demonstrated that although (supplementary) prescribing was successful, patients and GPs lacked awareness of it and it had not challenged medical dominance. In addition a study by Latter et al. (2010) demonstrated that (independent) non-medical prescribing (by pharmacists and nurses) is rated positively by other health care professionals and is highly acceptable to patients, but doctors remain unclear regarding the NMP's authority to prescribe. The Latter study also demonstrated that, to date, non-medical prescribing had largely been driven by the individuals involved and it had not enabled service re-design (it was used as a supplement to existing services). It was clear during phase one of this study that many of the patients and GPs did not understand non-medical prescribing. In particular the patients often confused the dispensing role of the pharmacist with that of prescribing, indicating a lack of awareness of pharmacist prescribing. In addition the GPs, despite having experience of working with practice-based pharmacists, expressed concerns regarding a conflict of interest between the pharmacists' community business interests and a prescribing role, suggesting that a prescribing role for pharmacists would be inappropriate. This is supported in the literature by the work of Hughes and McCann (2003) who found that the "shop-keeper" image of the community pharmacist gave rise to GP concerns regarding extension of prescribing rights to pharmacists. Only one of the practices in this study had supported, and employed, a nurse prescriber. Despite this nurse having several post graduate clinical qualifications and an enthusiasm to develop the role, her prescribing practise was confined to that of oral contraceptive prescribing only.

When training to become a non-medical prescriber was discussed time again featured heavily – time to complete the course versus the time it took to assess a patient, print a prescription and then get the GP to sign that prescription. In this instance time was discussed in terms of the personal cost to the nurses in completing the course (which was viewed as a significant investment of personal time, albeit over a relatively short period) versus the small, but incremental, amount of time spent in getting a prescription signed. This latter use of time was reduced further in the practices that permitted the nurses to interrupt a patient's consultation with the GP to obtain the required signature. However, some of the issues associated with such behaviour are the apparent disregard for the patient's agenda in permitting, even encouraging, possibly frequent interruptions in the consultation, and the fact that this reinforces the hierarchical status of the GP, over the nurse, to the patient. Allowing the practice nurses to generate a prescription, which the GP then has to sign, could suggest the GP is pro-actively engaging with the shift in skills and vision for the new NHS whilst, in reality, this is a smoke screen. He is merely creating an atmosphere of engagement whilst maintaining his control over the prescribing process. Even the term "non medical prescriber" somehow makes it sound less valuable because it is "not medical" prescribing (Weiss & Sutton, 2009).

In spite of such limitations, there is evidence to suggest that nurse NMPs deliver as high a standard of care to patients as GPs (Clark et al., 2010), and levels of patient satisfaction are high (Latter and Courtenay, 2004). There is less research on patient perceptions of pharmacist prescribing with the majority of the existing research considering the pharmacists' perceptions of their prescribing (Tonna et al., 2007; Johnson et al., 2006). A more recent study (Stewart et al., 2009) indicated that just over half of the (Scottish) general public were aware of non-medical prescribing. Just over half of these respondents were more comfortable with pharmacist and nurse prescribing than prescribing by other health care professionals.

The above evidence would suggest that NMPs, with a lower hourly rate than their medical counterparts, could be a cost effective option to GPs. However, there is also evidence suggesting that nurse practitioners have longer consultation times and higher return consultation rates (Venning et al., 2000) than their medical counterparts, thus overall the cost effectiveness of NMP is less clear. One of the reasons cited for this is that nurse practitioners may be uncovering previously unmet health needs. This study did not consider cost effectiveness of NMPs however it did suggest that, locally, non-medical prescribing was poorly understood and did not appear to be being exploited to its full potential, suggesting that more work is needed to be undertaken in promoting this activity and gathering data on its cost effectiveness.

When discussing the role of the practice nurses, patients and GPs often referred to task based roles that the nurses undertook and referred to them following protocols. One GP expressed the view that nurses were better at following protocols than doctors who rely on a more intuitive grasp of patient issues. The context of this GP's quote seemed to imply that following protocols was in some way inferior to GPs using their intuitive "antennae" and that this served to promote the hierarchical status of the GP. They reviewed and approved the protocols and the nurses followed them. Research in secondary care supports this view which suggests nurses, more than doctors, prefer a rules based system of approach to patient care (McDonald et al., 2005). Despite an apparent "distaste" for protocols (and the associated structure they afforded) the majority of HCP respondents (GPs, nurses and pharmacists alike) approved of the structure that the quality outcomes framework (QOF) provided. It could reasonably be argued that the QOF is simply a national protocol for the disease states contained within it – although one of the differences could be that completion of the targets contained within the QOF provides a payment structure for practices. Whilst the majority of HCPs considered the QOF to be good medicine, most felt that they were already undertaking many of these aspects and that the QOF was merely formalising what they already knew, but perhaps were not always able to quantify, was happening. Overall there was a relatively even split between

those that considered QOF provided structure and good patient-focused care and those that felt it simply indicated the practice was organised and hadn't necessarily improved overall health outcomes. Both nurses and pharmacists were more likely, than GPs, to consider that the QOF was beneficial in terms of providing structure. This could be related to protocol preference attitudes of pharmacists / nurses.

It was considered by many that the QOF helped to provide good evidence-based medicine, with targets that were quantifiable and measurable. There was also a view that it had possibly introduced a "tick box" culture to consultations – focusing the attention of the consultation on achieving QOF targets which may, or may not, be related to the patient's agenda. This seems contrary to the health policy ideals of a patient centred approach to consultations. Not only does it force a task based approach to medicine and ignore the less easily quantifiable psychosocial elements, it also detracts from the patient's agenda and causes HCPs to focus on areas that may not be as relevant to patients – at least not at that point in time. This is further supported by a study by The King's Fund (Dixon et al., 2011) which suggested that QOF had "*entrenched a medicalised and mechanistic approach to managing chronic disease that does not support holistic care or promote self-care and self-management".* The Dixon report also suggested that there was limited evidence that the QOF had improved health outcomes or reduced health inequalities.

The final area that highlighted some interesting debate was the topic of continuity of care, in particular during the "out of hours" (OOH) period during the evenings and at weekends. The GPs considered that continuity of care with the same GP for all conditions was important. This resulted in a disparity when the provision of care during evenings and at weekends was discussed. The GPs appeared to deem continuity of care important Monday through to Friday; however they were, largely speaking, not keen to provide such a service either into the evening or at weekends. When it was suggested that routine chronic disease management could be

provided, during such OOH periods, by nurses or pharmacists, there was a view that there would have to be a GP present. The majority of HCPs could not conceive of a health care service without the need for a GP. Only one-third (33.3%) of HCP respondents felt that routine chronic disease management could be undertaken by an appropriately trained non-medically qualified professional (question 8, HCP questionnaire) and yet 48.8% of HCP respondents stated that "*all our routine chronic disease management is undertaken by the practice nurses"* (question 10, HCP questionnaire). Personal experience, within the local area, would suggest that this figure is in fact low and that a much higher percentage of routine chronic disease management is undertaken by the practice nurses and, in some cases, practice-based pharmacists. This is often undertaken with minimal GP input - they may not even be on the premises, although the GP is likely to retain overall clinical responsibility.

Having further considered continuity of care it became apparent that, as with time, this was a very complex area and, possibly, it was the HCPs who wanted it more than the patients. There are several possible interpretations as to what continuity of care means. Traditionally studies have concentrated upon longitudinal (or relational) continuity, that is the relationship between an individual HCP, usually the GP, and their patient. However, more recently, Haggerty et al. (2003) defined continuity of care in terms of both information and management. In this study some patients assumed longitudinal continuity, however for some it was clear they preferred different HCPs for different conditions (depending upon the perceived specialism of the HCP) albeit the same HCP for any one single condition they had. This adds yet another facet to continuity of care. Some patients seemed to prefer a degree of specialism from the HCP managing their condition whereas the HCPs (particularly the GPs) preferred to retain their generalist role. However, no standard definitions were applied thus it is not clear that the individuals and / or groups of professionals were placing the same interpretation on what a specialist role was when compared with a generalist role. It is however valuable to

note that patients appear to want more specialised services delivered locally, this is in agreement with the vision for the new patient-led NHS.

When declaring patient preferences in phase three there were differences between the patient's stated preferences (as illustrated in the ranking exercise (section 7.4.2)) and their actual preferences as demonstrated within the discrete choice experiment (DCE). In addition both of these preferences may also differ from what they actually do in real-life. In the ranking exercise the patients stated that continuity of care (defined here as "*whether I see the same person at each consultation")* as the most influential utility on their choice of consultation. However, in the DCE, they traded this utility for being seen by a GP, being seen on the day, being seen on time (or within 20 minutes of the allocated appointment time) and being seen by any HCP with specialist training in their (theoretical) condition, in this case hypertension. Similarly the patients' second rated utility (after continuity of care) was having enough time in the consultation. However, in the DCE, the patients were willing to trade both 20 and 30 minute consultations for every other utility.

This study has shown just how complicated health care requirements are. It is supported by existing research in many areas but, in particular, questions whether it is patients who want continuity of care and more time with the HCP, or the other way around. Although patients are stating they want continuity of care and longer consultations their selected preferences suggest otherwise. It is possible that they state these preferences because they know, or think, this is what the HCPs (in particular the GPs) want. It also brings into question just how far health care, and attitudes of HCPs, have moved in terms of re-engineering services to be more service user, rather than service provider, focused. Perhaps we are still actually designing services around the service provider rather than the user.The final sections will now discuss the wider implications of this work for policy and practice and also for future research.

8.4 Wider implications for policy and practice

Despite the recent shifts in Government policy to suggest a more service user focus was required in delivery of NHS services, it would appear that systems in primary care are currently still built around the preferences of the service provider. This would suggest that, to date, the policies have either not gone far enough in delivering a patient centred approach to care, or, the current policies are not being implemented.

It is clear that there are differences in interpretation of several key aspects of health care provision. Namely there are several facets to both time and continuity of care as well as potential differences in definitions of terms such as specialism and generalism. There are also differences in patient requirements based on demographic variables such as age, gender, employment status and presence of either acute or chronic conditions (or even acute exacerbations of chronic conditions). This makes delivery of health care, and the development of appropriate policies, highly complex. Systems that provide flexibility and can accommodate a variety of requirements need to be in place. In addition these each need to be accessible to the entire local population. It would appear that more specialised services are wanted by patients locally, but GPs, in particular, were more in favour of the generalist role. However, there were no standard definitions applied thus it is not clear what criteria each individual and / or group were applying when discussing these roles. It would also appear that provision of primary care services (including those for routine chronic disease management) were required during the out of hours periods of evenings and weekends. This could be provided through the use of NMPs, however, there was evidence that, locally, the expertise of NMPs was not being fully realised. Even areas where there were NMPs their skills were not being utilised to their full potential. Such skills could be exploited within the confines of a multi-professional team. A team approach to patient care needs to be developed but, to ensure some degree of continuity, this should be co-ordinated by a single individual. This individual does not have to be the GP, although it could be. Whether it should be this individual who then retains the responsibility for that

patient is more debatable. It could be that the GP, after liaising with the relevant responsible HCP, retains the responsibility.

It is clear that the NHS is struggling to keep ahead of the societal demands placed upon it by an ageing, and more demanding, population. There does need to be a significant review of how primary care services are delivered. There also needs to be a significant change in mind set if some of the existing policies are to be implemented to achieve their full potential. However against this is the backdrop of a limited resource that may need to respond to competing demands. Whilst the value of patient choice should not be under-estimated there is a financial burden in providing a variety of services (e.g. access centres and "one-stop-shops" as well as more traditional family GPs) in a variety of locations. In addition this study would suggest that patients like to be informed about treatment option, and they like the idea of having choice, however it is not clear that that they actually want to have real choice. It would appear that they want to be involved in the process of decision making but prefer to leave the actual decision to the GP or HCP. This brings into question whether the Government should continue to pursue a health care policy that is so focused on patient choice.

8.4.1 Recommendations for practice

Whilst it is accepted that this is a relatively small study and that further work needs to be undertaken to establish exactly how age groups, genders and work patterns influence patient choice in primary care, there are still a number of recommendations that may be taken from this work (either to consider for future policy or for further areas of research to establish the actual extent, or not, of the issues). These are:

1. **Increased consultation duration – who wants it?** To date considerable focus has been given to the actual duration of the consultation ("clock-time"), with much of the literature suggesting that it is patients who want more time. From the DCE work it would appear that, despite stated preferences to the contrary, the

duration of the consultation is actually of relatively little importance to patients when considered against other attributes, such as access and the qualification and / or degree of specialism of the HCP. On the other hand, from phase 1 of this study, the HCPs often cited the fact that they felt consultations need to be longer.

If HCPs feel consultations need to be longer this should be raised as an issue and open dialogue undertaken regarding what can be stopped, or done differently, if capacity does not allow for it to happen. From the patient's perspective it would appear that it is the "I-time" that should be the focus of our attention (rather than the "clock-time") – ways to increase satisfaction with the consultation that do not necessarily involve duration e.g. ensuring the patient's agenda is addressed.

2. **More effort needs to be directed towards integrating the QOF agenda into patient-focused consultations:** A potential barrier to ensuring the patient's agenda is addressed, as noted by many of the HCPs in phase two, is the QOF. Given these views and the recent work by Dixon et al. (2011) it may be time to reconsider whether the QOF does support, or hinder, the move towards a more patient focused NHS. If it is providing structure to enable practices identify patients that may otherwise "*slip through the net*" then it may be considered to be of benefit, albeit at a cost. However, if it becomes merely a mechanism for collecting points (and hence financial reward) and detracts from the patient's agenda then its usefulness should be questioned.

   While considerable progress has been made in making consultations more focused on the patient's agenda, more effort on developing individual, and groups of, professionals and the communication skills that are required to achieve this needs to occur.

3. **There is a need for enhancing levels of multidisciplinary working and gaining and understanding of what other health professionals do. This could be aided by increasing the level of inter-professional learning as part of training:** In considering the above recommendations, as indicated by the HCPs in phase 2 of this study, there is still work to be considered regarding a multidisciplinary team approach to managing patients with long term conditions and possibly multidisciplinary training regarding consultation skills in particular. Given the apparent disparity between how patient centred the HCPs felt their consultations were and how patient centred the patients felt they were, multidisciplinary training in this area may be worthwhile – especially as not all the professionals appeared to understand the work of their colleagues. An area particularly pertinent, from this study, to pharmacists; but also, from this study and recent literature (Latter, et al., 2010), pertinent to all NMPs.

4. **The role of NMPs could be enhanced by developing their role in providing out of hours specialist care:** Whilst GPs appeared to prefer the "generalist" role the patients and, to some degree, the nurses and pharmacists (in particular those qualified as NMPs) appeared to prefer a more specialist service delivered locally. Patients' preferences for "*any HCP with specialist training*" was the third most influential attribute in their selected preferences (after "*being seen on the day*" and "*being seen by the GP*"). Potentially there is a marketing role here for NMPs to extend specialist services locally – in particular during the out of hours period during the evening and at weekends (when the GPs were not as keen on providing the services).

5. **The dominance of "Patient Choice" in health care policy may not reflect the views of patients, who like to have choice but not necessarily to choose:** With respect to policy, it would appear from this, and other, (Longo et al., 2006) work that patients may like to have choice but do not necessarily wish to choose. This

would suggest a shift in policy may be required to accommodate the fact that patients may wish to know what options there are but still prefer the HCP to make the decision for them.

Further work needs to be undertaken however, in the meantime, this study suggests there are lessons to be learned from listening to patients. There are some broad lessons that may be implemented but it is apparent that flexibility in services are also necessary. The required service types are likely to be related to the specific characteristics of the patient populations served by a particular practice and / or locality. Different groups appear to have different requirements. A "*top down, one size fits all*" Government policy initiative approach is unlikely to meet the needs of all populations, there needs to be capacity to develop ways of working tailored and flexible to local needs.

Although supported by previous research this is, of course, a very small study. Further research on some of the areas identified is required before long term principles for health care policy should be established. Some of this suggested research is outlined below in section 8.5.

8.5 Future research

It would seem that there can be no "one size fits all" approach to primary care services. More research is required into the specific requirements of specific groups of patients. There appear to be different requirements based on variables such as employment status, age, gender, social deprivation and chronic versus acute conditions.

It is also necessary to once again look at time, and the multifaceted aspect of it, in primary care. This could be considered from the perspective of total time spent in the practice (i.e. the time spent waiting after the allocated appointment time and the duration of the consultation) and whether or not it is this total time that is the limiting factor for patients (rather than just the consultation duration). It would also be interesting to investigate whether or not patients place equal value on each of these aspects and how, if at all, one impinges on the other (for example, if

patients are seen on time do consultation durations increase or decrease?). How each aspect links in with availability of appointments and access to them may also be considered.

Other aspects of this programme of work considered non-medical prescribing and focused upon the traditional “family doctor” practice scenario. Many of the respondents interviewed had been brought up within such a structure. They had limited experience of non-medical prescribers and, for example, walk-in centres. Whilst younger respondents appeared to be more supportive of such new ways of working it would be useful to see how their attitudes develop as they age and, potentially, develop more chronic diseases. Whether continuity of care and a preference to visit the GP, rather than another HCP, is driven by age, experience of (and exposure to) such practice or whether it is driven by the development of chronic conditions and more complex health care needs.

There is relatively little work regarding patients’ views and experiences of nurse and, in particular, pharmacist independent prescribing. This study was largely concerned with hypothetical views of non-medical prescribing as few of the respondents had had exposure to it. It was also apparent that patients were confused between dispensing and prescribing. It would be useful to know more about the utilities of time, continuity of care, access and preferred professional when patients had received exposure to NMP. This would have to be conducted taking into consideration various demographic factors such as gender, age and work status. It would also be useful to know if there are cultural differences – if, for example, cultures with a central, high status role for medical doctors would have greater difficulty in accepting non medical prescribing.

Perhaps the most significant focus of future work should be a larger study looking at patients’ views on choice. Whether or not patients, across a range of demographic profiles, really do want choice or whether it is the involvement in the decision making process that is more important to them. Patient choice is currently a major focus of Government policy and

it is not clear, from this small study, that real choice is what patients want. Patients in this study appeared to prefer choice around the process of decision making rather than having the choice and making the decision themselves. This is potentially a key change in direction for current Government policy.

Phase two of this programme of work did consider work patterns, gender and type of professional however, due to the relative numbers of female nurse respondents and male GP respondents it was difficult to draw conclusions. It would therefore be useful to conduct a study with male and female GPs, and male and female nurses / pharmacists, to assess if the views expressed in this study were a gender issue or a GP / nurse issue. Similarly it would be interesting to understand more fully what “types” of patients were causing scattering around the various utilities and whether or not the outliers were from specific age bands, due to gender or due to other factors.

8.6 Conclusion

Initially this programme of work was divided into quality issues and service / organisational issues. But it is clear that there are no demarcation lines and many aspects of care fall into both camps or straddle the path between them. Delivery of health care in primary care is very complex. There are multifaceted aspects to time and continuity of care, plus services are going to need to provide flexibility to meet the requirements of demographically diverse populations.

It is apparent that both continuity of care and time are important in primary care. It is not, however, as clear whether these are now more important to the HCP rather than the patient. Historically studies have suggested that it is the patients who want more time with their GP. This study however casts some doubt on this assumption and suggests that it could be the GP (or HCP) who requires more time with the patient. However time has been shown to be a multifaceted component of primary care and more work is required to understand what aspects of it are the most important.

It would appear that NMPs locally are not being exploited to their full potential and, if this situation is replicated nationally, there may be a marketing role for such individuals. Potentially, as a consequence of the relatively low level of uptake of NMP, patients continue to value seeing their GP and GPs remain “top of the pile”. However, NMPs could be utilised more effectively and need to work harder to raise awareness of the potential benefits of NMP and increase their impact. A potential way to encourage this could be through the availability of “on the day” appointments and promoting the specialised knowledge aspects of NMPs. Both of these aspects were utilities that patients, in the DCE phase, rated almost as highly (or possibly higher in terms of being seen on the day) as being seen by a GP. Responses may have been different, however, had the respondents received more exposure to NMPs and their skills.

Skill mix is required so that the benefits of new ways of working are more widely disseminated. One way to achieve this, as well as a greater understanding of each others’ roles and responsibilities, may be through engagement in more multi-professional learning and training together. There still appears to be a lack of awareness of alternative ways of working. Greater interaction in terms of multi-professional learning is one possible way to address this. In addition training in consultation and communication skills and delivery of a patient-centred approach to consultation – listening to the patients’ agenda rather than interrupting and redirecting – may improve quality and provide more “I-time” without a significant impact upon “clock-time”. This could include training to ensure that the achievement of the QOF agenda, rather than the patient’s agenda, is not quite as overt.

It would appear that more specialised services are wanted by patients locally but GPs, in particular, were more in favour of the generalist role. It is important to clarify what the appropriate balance between generalism and specialism actually is if the vision of a truly patient-led NHS is to be realised. In addition there needs to be clarification of what “patient choice” means to patients and whether this does, or does not, hold the same

meaning as for HCPs and Government policy makers. Whether it is choice per se that patients want, as it would appear from current Government policy, or whether it is having choices and being involved in the decision making process that is important. Many aspects of this programme of work indicated that although progress towards a more patient-led NHS had been made, the service was still predominantly service provider focused. In particular, that in terms of both delivery of care and team working, traditional paternalistic ways of working still prevail.

References

Reference list

Airey, C. & Erans, B. (eds) (1998). *National Survey of NHS patients: General Practice.* London, NHS Executive

Arrindell, W. & van der Ende, J. (1985). An empirical test of the utility of the observations-to-variables ratio in factor and components analysis. *Applied Psychological Measurement, 9*, 165 - 178

Atkins, M (2005) "Soap Boxes" Rapid response to *BMJ,* 331:1159doi:10.1136/bmj.331.7526.1159 (accessed online December 2005)

Avery, AJ & Pringle, M. (2005) Extended prescribing by UK nurses and pharmacists. *BMJ,* 331, 1154 – 1155

Badger, F. & Werrett, J. (2005) Room for improvement? Reporting response rates and recruitment in nursing research in the past decade. *Journal of Advanced Nursing,* 51(5), 502 – 510

Bandolier (2010). *What patients think.* (Online) Available at: http://www.medicine.ox.ac.uk/bandolier/band108/b108-6.html (accessed 20.03.10)

Barnett, J., Ogden, J. & Daniells, E. (2008) The value of choice: a qualitative study. *British Journal of General Practice,* 58, 609 – 13

Bartlett, M.S. (1954). A note on the multiplying factors for various chi square approximations. *Journal of the Royal Statistical Society, 16 (Series B),* 296-8.

Barry, C., Bradley, C., Britten, N., Stevenson, F. & Barber, N. (2000) Patients' unvoiced agendas in general practice consultations: qualitative study. *BMJ*, 320, 1246 – 50

BBC News (2004). *48-hour target "damaging GP care".* (online) Available at: http://news.bbc.co.uk/1/hi/health/3682920.stm (accessed 02 Oct 2010)

BBC News (2005). *Patients denied advanced bookings.* (online) Available at: http://news.bbc.co.uk/1/hi/health/4112390.stm (accessed 02 Oct 2010)

Black, N., Brazier, J., Fitzpatrick, R. & Reeves, B. (1998). *Health Services Research Methods – A guide to best practice*. London, BMJ Books

Bland, M.J. & Altman, D.G. (1995). Multiple significance tests: the Bonferroni method. *British Medical Journal*, 310, 170.

Bland, M.J. & Altman, D.G. (1997). Statistics notes: Cronbach's alpha. *British Medical Journal*, 314, 572.

Boggis, A. & Cornford, C. (2007) General Practitioners with special clinical interests: a qualitative study of the views of doctors, health managers and patients. *Health Policy,* 80, 172 – 178

Bowling, A. (2002). *Research methods in health: Investigating health and health services (second edition).* Buckingham, Open University Press

Bradley, E., Campbell, P. & Nolan, P. (2005) Nurse prescribers: Who are they and how do they perceive their role? *Journal of Advanced Nursing,* 51 (5), 439 - 448

Britten, N., Stevenson, F., Barry, C., Barber, N. & Bradley, C. (2000) Misunderstandings in prescribing decisions in general practice: qualitative study. *BMJ*, 320, 484 – 8

Britten, N. & Weiss, M. Chapter 2: What is concordance? In: Bond C (ed). Concordance. London: *The Pharmaceutical Press*, 2004, p. 9 - 28

Brooker, N (2005) “Pick ‘N Mix” Rapid response to *BMJ,* 331:1159doi:10.1136/bmj.331.7526.1159 (accessed online December 2005)

Buckley, P., Grime, J. & Blenkinsopp, A. (2006) Inter- and intra-professional perspectives on non-medical prescribing in an NHS trust. *The Pharmaceutical Journal,* 277, 394 - 398

Charles, C., Gafni, A. & Whelan, T. (1999) Decision-making in the physician-patient encounter: revisiting the shared treatment decision-making model. *Social Science Medicine*, 49, 651 – 61

Charles-Jones, H., Latimer, J. & May, C. (2003) Transforming general practice: the re-distribution of medical work in primary care. *Sociology of Health and Illness,* 25, 71 - 92

Cheraghi-Sohi, S., Hole, A., Mead, N., McDonald, R., Whalley, D., Bower, P. & Roland, M. (2008) What patients want from primary care consultations: a discrete choice experiment to identify patients’ priorities. *Annals of Family Medicine,* 6, 107 - 115

Clark., C., Smith, L., Taylor, R. & Campbell, J. (2010) Nurse led interventions to improve control of blood pressure in people with hypertension: systematic review and meta-analysis. (online) *BMJ,* 340, c3995 (accessed September 2010)

Coast, J., Noble, S., Noble, A., Horrocks, S., Asim, O., Peters, T. & Salisbury, C. (2005) Economic evaluation of a general practitioner with Special interest led dermatology service in primary care. *BMJ,* 331, 1441 – 1447

Coast, J. And Horrocks, S. (2007) Developing attributes and levels for discrete choice experiments using qualitative methods. *Journal of health services research and policy,* 12, 25 - 602

Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2nd edn.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Cohen, J. (1992) A Power Primer. *Psychological Bulletin,* 112, 155 – 159

Cole, F., Mackey, T. & Lindenberg, J. (2001) Wait time and satisfaction with care and service at a nurse practitioner managed clinc. *Journal of the American Academy of Nurse Practitioners,* 13 (10), 467 – 472

Commonwealth Fund/Harvard/Harris. (2000). *International Health Policy: Survey of Physicians*. New York, Commonwealth Fund

Comrey, A. & Lee, H. (1992). *A first Course in Factor Analysis*. New Jersey, Erlbaum.

Connelly, D. (2005) Independent prescribing – pharmacists are given the flexibility of a full formulary. *Pharmaceutical Journal,* 275, 627 – 8

Cooper, R., Anderson, C., Avery, T., Bisell, P., Guillaume, L., Hutchinson, A., James, V., Lymn, J., McIntosh, A., Murphy, E., Ratcliffe, J., Read, S. & Ward, P. (2008) Nurse and pharmacist supplementary prescribing in the UK – A thematic review of the literature. *Health Policy,* 85, 277 - 292

Cooper, R., Bissell, P., Ward, P., Murphy, E., Anderson, C., Avery, T., James, V., Lymn, J., Guillaume, L., Hutchinson, A. & Ratcliffe, J., (2011) Further challenges to medical dominance? The case of nurse and pharmacist supplementary prescribing. *Health.* (Online) Available from: doi: 10.1177/1363459310364159 (accessed 16th February 2011)

Coulter, A. (1999) Paternalism or Partnership? – Patients have grown up and there's no going back. *BMJ,* 319, 719

Coulter, A. & Ellins, J. (2007) Effectiveness of strategies for informing, educating, and involving patients. *BMJ,* 335, 24 – 27

Day, M. (2005) UK doctors protest at extension to nurses' prescribing powers. (Online) *BMJ* 311:1159doi:10.1136/bmj.331.7526.1159 (accessed December 2005)

Degner, L. & Sloan, J. (1992) Decision making during serious illness: What role do patients really want to play? *Journal of Clinical Epidemiol*ogy, 45, 941 – 50

Dennis, S., May, J., Perkins, D., Zwar, N., Sibbald, B. & Hasan, I. (2009) What evidence is there to support skill mix changes between GPs, pharmacists and practice nurses in the care of elderly people living in the community? *Australia and New Zealand Health Policy,* 6, 23

Department of Health. (1989) R*eport of the advisory group in nurse prescribing (The Crown Report).* London, DH

Department of Health. (1999) *The final report of the prescribing, supply and administration of medicines (The (second) Crown Report).* London, DH

Department of Health. (2000a) *The NHS Plan: a plan for investment, a plan for reform*. London, DH

Department of Health. (2000b) *Pharmacy in the future: Implementing the NHS plan*. London, DH

Department of Health. (2001a) *Health and Social Care Act.* London, DH

Department of Health. (2001b) *The Expert Patient: A new approach to chronic disease management for the 21st century*. London, DH

Department of Health and Royal College of General Practitioners. (2002a) *Implementing a Scheme for general Practitioners with Specialist Interests*. London, RCGP

Department of Health. (2002b) *Helping primary care trusts and nurses to deliver the NHS Plan*. London, DH

Department of Health. (2003) *Liberating the Talents: Implementing a scheme for nurses with special interests in primary care*. London, DH

Department of Health. (2004a) *The NHS Improvement Plan: Putting people at the heart of public services*. London, DH

Department of Health. (2004b) *"Choose and Book" – Patients choice of hospital and booked appointments: polict framework for choice and booking at the point of referral.* London, DH

Department of Health. (2004c) *Practice Based Commissioning: Promoting clinical engagement.* London, DH

Department of Health. (2004d) *Choosing health: Making healthier choices easier.* London, DH

Department of Health. (2005a) *Creating a Patient-Led NHS: Delivering the NHS improvement plan*. London, DH

Department of Health. (2005b) *Commissioning a Patient-led NHS*. London, DH

Department of Health. (2005c) *Nurse and pharmacist prescribing powers extended.* Press release, 10th November 2005 (online) London, DH www.dh.gov.uk (accessed December 2005)

Department of Health. (2005d) *Implementing a Scheme for Practice Managers with Special Interests*. London, DH

Department of Health. (2005e) *"Your Health Your Care Your Say"*. London, DH

Department of Health. (2005f) Independence, well-being and choice: Our vision for the future of social care for adults in England. London, DH

Department of Health. (2006a) *Improving access to medicines – the DH guide to implementation of nurse and pharmacist independent prescribing.* London, DH

Department of Health. (2006b) *Implementing care closer to home – providing convenient quality care for patients: A national framework for Pharmacists with Special Interests.* London, DH

Department of Health. (2006c) *Our Health Our Care Our Say*. London, DH

Department of Health. (2006d) *The National Evaluation of the pilot phase of the Expert Patient Programme.* London, DH

Department of Health. (2008) *Consultation on GP Quality Incentive Scheme.* (online) Available from: http://www.dh.gov.uk/en/News/recentstories/DH_089804 (accessed 7th November 2008)

Department of Health. (2010) *GP extended opening hours.* (online) Available from: http://www.dh.gov.uk/en/Publicationsandstaistics/statistics/performancedataandstatistics/Primarycare/DH_089459 (accessed September 2010)

Department of Health and Medicines and Healthcare Products Regulatory Agency (MHRA). (2005a) *Consultation on options for the future of independent prescribing by extended formulary nurse prescribers* (online). Available from: http://www.dh.gov.uk/assetRoot/04/10/40/58/04104058.pdf (accessed November 2005).

Department of Health and Medicines and Healthcare Products Regulatory Agency (MHRA) (2005b). *Consultation on proposals to introduce independent prescribing by pharmacists* (online). Available from: http://www.dh.gov.uk/assetRoot/04/10/48/81/04104881.pdf (accessed November 2005).

Dickson, G., Price, L., Maclaren, W. & Stein, W. (2004) Perception of risk a study of A&E nurses and managers. *Journal of Health Organisation and Managment,* 18 (5), 308 -320

Dixon, A., Khachatryan, A., Wallace, A., Peckham, S., Boyce, T. & Gillam, S. (2011) *Impact of quality and outcomes framework on health inequalities.* The King's Fund, London

Donovan, J. & Blake, D. (1992) Patient non-compliance: deviance or reasoned decision-making. *Social Science and Medicine*, 34, 507 – 513

Douglas, E., Powe, A. & Hudson, S. (2007) Pharmaceutical care of the patient with diabetes mellitus: pharmacists' priorities for services and educational needs in Scotland. *International Journal of Pharmacy Practice,* 15, 47 - 52

Edwards, P., Roberts, I., Clarke, M., DiGuiseppi, C., Pratap, S., Wentz, R. & Kwan, I (2002) Increasing response rates to postal questionnaires: systematic review. *BMJ*, 324, 1183 – 1192

Elwyn, G., Edwards, A. & Kinnersley, P. (1999) Shared decision-making in primary care: the neglected second half of the consultation. *British Journal of General Practice,* 49, 477 – 482

Fear, T. & de Renzie-Brett, H. (2007) Developing interprofessional working in primary care. *Practice development in Health Care,* 6, 107 – 118

Ferriman, A. (2000) Public's satisfaction with the NHS declines. *BMJ*, 321, 1488

Fotaki, M., Roland, M., Boyd, A., McDonald, R., Scheaff, R. & Smith, L. (2008) What benefits will choice bring to patients? Literature review and assessment of implications. *Journal of Health Services Research and Policy,* 13, 178 - 184

Freeman, G. & Hjortdahl, P. (1997) What future for continuity of care in general practice? *BMJ,* 314, 1870 - 1873

Freeman, G., Horder, J., Howie, J., Hungin, A. Hill, A, Shah, N. & Wilson, A. (2002) Evolving general practice consultations in Britain: issues of length and context. *BMJ*, 324, 880 - 882

General Practitioners Committee & The NHS Confederation. (2003) *New GMS contract 2003*. London, General Practitioners Committee & The NHS Confederation

Gerard, K & Lattimer, V. (2005) Preferences of patients for emergency services available during usual GP surgery hours: a discrete choice experiment. *Family Practice,* 22, 28 - 36

Gerard, K., Salisbury, C., Street, D., Pope, C. & Baxter, H. (2008) Is fast access to general practice all that should matter? A discrete choice experiment of patients' preferences. *Journal of Health Service Research and policy,* 13, 3 - 10

Gloucestershire Primary and Community Care Audit Group. (Online) Available from: www.glospccag.nhs.uk (accessed, September 2010)

Godlee, F. (2008) What skills do doctors and nurses need? *British Medical Journal,* 337: a1722

GP lose antenatal role. 2007. *GP*, February 16, 4. (Online) Available from: http://www.proquest.com/ (accessed September 28, 2010)

GPSI move could lead to deskilling. 2006. *Pulse*, April 6, 2. (Online) Available from: http://www.proquest.com/ (accessed September 28, 2010).

Grol, R., Giesen, P. & van Uden, C. (2006) After-hours care in the United Kingdom, Denmark, and The Netherlands: New models. *Health Affairs,* 25, 1733 - 1737

Guadagnoli, E. & Ward, P. (1998) Patient participation in decision-making. *Social Science and Medicine,* 47, 329 - 39

Gubb, J. & Li, G. (2008) Checking-up on Doctors: A review of the Quality Outcomes Framework for General Practitioners. (Online) Available from: http://www.civitas.org.uk/nhs/download/checking_up_on_doctors (accessed 22nd September 2010)

Haggerty, J., Reid, R., Freeman, G., Starfield, B., Adair, C. & McKendry, R. (2003) Continuity of care: A multidisciplinary review. *BMJ,* 327, 1219 - 1221

Hair, J., Anderson R., Tatham R., Black W.C. (1998) *Multivariate Data Analysis* (5th edn.). New Jersey, Prentice-Hall International.

Haynes, R., McKibbon, K. & Kanani, R. (1996) Systematic review of randomised trials to assist patients to follow prescriptions for medications. *Lancet*, 348, 383 - 6

Healthcare Commission. (2005) *Primary care trusts: survey of patients 2005.* London, Commission for Healthcare Audit and Inspection

Hegde, B. (2009) Patient care is CARING for the patient! Rapid response to *BMJ,* 338: b588

Hensher, D., Rose, J. & Greene, W. (2007) *Applied Choice Analysis: A Primer*. Cambridge, Cambridge University Press

HMSO. (1986) *Cumberlege Report*: *Neighbourhood nursing: a focus for care*. London, HMSO

Hobson, R. & Sewell, G. (2002) UK survey of discharge prescriptions, transcribing and development of the hospital pharmacist-prescribing role. *International Journal of Pharmacy Practice*, 10 (suppl): R12

Horrocks, S., Anderson, E. & Salisbury, C. (2002) Systematic review of whether nurse practitioners working in primary care can provide equivalent care to doctors. *BMJ*, 324, 819 - 823

Horton, R. (2002) Nurse prescribing in the UK: Right but also wrong. *Lancet,* 359, 1875 – 6

House of Commons Social Service Committee. (1987) *Primary health care (First report, session 1968-87).* London, HMSO

Howie, J., Heaney, D., Maxwell, M., Walker, J., Freeman, G. & Rai, H. (1999) Quality at general practice consultations: cross sectional survey. *BMJ*, 319, 738 – 43

Hughes, C. & McCann, S. (2003) Perceived interprofessional barriers between community pharmacists and general practitioners: a qualitative assessment. *British Journal of General Practice,* 53, 600 - 606

Hughes, D., Myles, S., Longo, M. & Lisles, C. (2008) *Investigating factors influencing user choices to visit either general practitioners or community pharmacists in the management of minor ailments – piloting a discrete choice experiment.* London, Pharmacy Practice Research Trust

Innes, M. & Skelton, J. (2005). Different kinds of time. *Family Practice,* 22 (4), 470

Jeffries, D. (2009) Complexity on Complexity. Rapid response to *BMJ,* 337, a3017

Jenkins, L., Britten, N., Barber, N., Bradley, C. & Stevenson, F. (2002) Consultations do not have to be longer. *BMJ,* 325, 388

Jenkins, N. (2011) A Project Management Primer: Basic Principles - Scope Triangle (online) Available from: http://www.projectsmart.co.uk/project-management-scope-triangle.html (accessed May 2011)

Johnson, G., McCaig, D., Bond, C., Cunnungham, I., Diack, H., Watson, A. & Stewart, D. (2006) Supplementary prescribing: Early experiences of Pharmacists in Great Britain *The Annals of Pharmacotherapy,* 40, 1843 - 1850

Junghans, C., Feder, G., Hemingway, H., Timmis, A. & Jones, M. (2005) Recruiting patients to medical research: double blind randomised trial of “opt-in” vs “opt-out” strategies. *BMJ,* 331, 940 - 942

Kaiser, H. (1970). A second generation Little Jiffy. *Psychometrika, 35,* 401-15.

Kaiser, H. (1974). An index of factorial simplicity. *Psychometrika, 39,* 31-36.

The King's Fund. (2010) *The quality of patient engagement and involvement in primary care.* London, The King's Fund

The King's Fund and NHS Alliance. (2007) *Practice based commissioning: From good idea to effective practice.* London, The King's Fund

Kline, P. (1979). *Psychometrics and psychology*. London, Academic Press

Kmietovicz, Z. (2002) R.E.S.P.E.C.T. – Why doctors are still getting enough of it. *British Medical Journal,* 324, 11

Koralage, N. (2004) GPs reluctant to cover out of hours work. *BMJ,* 328, 247.

Koshy, E., Millett, C. (2008) The "quality and outcomes framework": improving patient care, but are all patients benefiting? *Journal of the Royal Society of Medicine,* 101, 432 – 3

Latter, S., Yerrell, P., Rycroft-Malone, J. & Shaw, D. (2000) Nursing, medication education and the new policy agenda: the evidence base. *International Journal of Nursing Studies,* 37, 469 - 479

Latter, S. & Courtenay, M. (2004) Effectiveness of nurse prescribing: a review of the literature. *Journal of Clinical Nursing*, 13, 26 – 32

Latter, S., Maben, J., Myall, M. & Young, A. (2007a) Evaluating nurse prescribers' education and continuing professional development for independent prescribing practice: Findings from a national survey in England. *Nurse Education Today,* 27, 685 – 696

Latter, S., Maben, J., Myall, M. & Young, A. (2007b) Perceptions and practice of concordance in nurses' prescribing consultations: Findings from a national questionnaire survey and case studies of practice in England. *International Journal of Nursing Studies,* 44, 9 – 18

Latter, S., Blenkinsopp, A., Smith, A., Chapman, S., Tinelli, M., Gerard, K., Little, P., Celino, N., Granby, T., Nicholls, P. & Dorer, G. (2010) Evaluation of nurse and pharmacist independent prescribing. *Department of Health Policy Research Programme Project 016 0108* (Online) Available from: http://eprints.soton.ac.uk/184777/3/ENPIPfullreport.pdf (accessed May 2011)

Laurant, M., Hermens, R., Braspenning, J., Sibbald, B. & Grol, R. (2004) Impact of nurse practitioners on workload of general practitioners: randomised controlled trial. (Online) Available from: doi:10.1136/bmj.38041.493519.EE (accessed August 2010)

Lawley, D. & Maxwell, A. (1971). *Factor analysis as a statistical method*. London, Butterworth & Co.

Leibowitz, R., Day, S. & Dunt, D (2003) A systematic review of the effect of different models of after-hours primary medical care services on clinical outcome, medical workload, and patient and GP satisfaction. *Family Practice,* 20, 311 – 317

Little, P., Everitt, H., Williamson, I., Warner, G., Moore, M., Gould, C., Ferrier, K. & Payne, S. (2001) Observational study of effect of patient centredness and positive approach on outcomes of general practice consultations. *British Medical Journal,* 323, 908 - 911

Longo, M., Cohen, D., Hood, K., Edwards, A., Robling, M., Elwyn, G. & Russell, I. (2006) Involving patients in primary care consultations: assessing preferences using discrete choice experiments. *British Journal of General Practice,* 56, 35 – 42

Louviere, J., Hensher, D. & Swait, J (2003) *Stated Choice Methods: Analysis and application*. Cambridge, Cambridge University Press.

Love, M. & Mainous, A. (1999) Commitment to a regular physician: how long will patients wait to see their own physician for acute illness? *Journal of Family Practice,* 48, 202 – 207

MacCallum, R., Widaman, K., Zhang, S. & Hong S. (1999). Sample size in factor analysis. *Psychological Methods, 4*, 84-99

Magirr, P., Grimsley, M., Ottewil, R. & Noyce, P. (2004) The Clinical Autonomy of Community Pharmacists in England. *International Journal of Pharmacy Practice,* 12(4), 231 – 238

Marvel M., Epstein R., Flowers K. & Beckman H. (1999) Soliciting the patient's agenda: Have we improved? *Journal of the American Medical Association,* 281, 283 –287

Mason, V., Shaw, A., Wiles, N., Mulligan, J., Peters, T., Sharp, D. And Lewis, G. (2007) GPs' Experiences of Primary Care Mental Health Research: a Qualitative Study of the Barriers to Recruitment. *Family Practice,* 24(5), 518 - 525

McDonald, R., Waring, J., Harrison, S., Walshe, K. & Boaden, R. (2005) Rules and guidelines in clinical practice: a qualitative study in operating theatres of doctors' and nurses' views. *Quality and Safety in Health Care,* 14, 290 – 294

McKinley, R. & Middleton, J. (1999) What do patients want from doctors? Content analysis of written patient agendas for the consultation. *British Journal of General Practice,* 49, 796 - 800

Mechanic, D. (2001) How should hamsters run? Some observations about sufficient patient time in primary care. *BMJ,* 323, 266 - 268.

Mehrotra, A., Keehl-Markowitz, L. & Ayanian, J. (2008) Implementing open-access scheduling of visits in primary care practices: a cautionary tale. *Annals of internal Medicine,* 148, 915 - 922

Miles, M. & Huberman, A (1994). *An expanded sourcebook: Qualitative date analysis.* 2nd edition. London, Sage publications.

Moffat, M., Sheikh, A., Price, D., Peel, A., Williams, S., Cleland, J. & Pinnock, H. (2006) Can a GP be a generalist and a specialist? Stakeholders views on a respiratory General Practitioner with a special interest service in the UK. *BMC Health Services Research,* 6 (62)

Montgomery, D. (2008). *Design and analysis of experiments* (5th edition). New York, Wiley

Morrison, I. & Smith, R. (2000) Hamster health care. *BMJ,* 321, 1541 - 1542.

Murfin, D. (2001) Standards of access and quality in primary care. *Journal of the Royal Society of Medicine*, 94 (s39), 43 - 45

National Audit Office (2006). *The provision of out-of-hours care in England.* London, NAO

National Primary Care Research and Development Centre (2003). Assessing the Process of Embedding Epp in the NHS. Preliminary Survey of PCT pilot sites. Manchester, NPCRDC

NHS Workforce Review Team (2008). Workforce Summary – Pharmacy Workforce, Pharmacists and Technicians, September 2008 – England only. (Online) Available from: http://www.cfwi.org.uk (accessed January 2011)

NMC (2008). Statistical analysis of the register 1 April 2007 to 31 March 2008. (Online) Available from: http://www.nmc-uk.org/About-us/Statistics/Statistics-about-nurses-and-midwives/ (accessed January 2011)

Norušis, M. (2005). *SPSS 13.0 Statistical Procedures Companion*. Chicago, SPSS

Ogden, J., Bavalia, K., Bull, M., Frankum, S., Goldie, C., Gosslau, M., Jones, A., Kumar, S. & Vasant, K. (2004) "I want more time with my doctor": a quantitative study of time and the consultation. *Family Practice,* 21 (5), 479 – 483

Ogden, J., Daniells, E. & Barnett, J. (2008) The value of choice: Development of a new measurement tool. *British Journal of General Practice,* 58, 614 - 18

Oliver, D. (2008) Care and Quality Indicators: QOF and public health priorities don't improve care in ageing. *BMJ,* 337, a1403

Online Educational research journal (2011). Sample size consideration in factor analysis. (Online) Available from: http://www.oerj.org/View?action=viewPDF&paper=29 (accessed April 2011)

Oppenheim, A. (2004) *Questionnaire design, interviewing and attitude measurement* (new edition). London, Continuum.

Pallant, J. (2007) *SPSS survival manual (third edition).* Maidenhead, Open University Press.

Payne, J., Bettman, J. & Johnson, E. (1993) *The adaptive decision maker.* Cambridge, University press.

Pharmaceutical Journal online (10th November, 2005). *"Independent prescribing by pharmacists announced"*. (Online) Available from: www.pjonline.com (accessed 20.12.2005)

Pollock, K. & Grime, J. (2002) Patients' perceptions of entitlement to time in general practice consultations for depression: qualitative study. *BMJ*, 325, 687 – 698

Presser, S., Rothgeb, J., Couper, M., Lessler, J., Martin, E., Martin, J. & Singer, E. (2004) *Methods for testing and evaluating survey questionnaires.* New York, Wiley.

Richards, A., Carley, J., Jenkins-Clarke, S. & Richards, D. (2000) Skill mix between nurses and doctors working in primary care – delegation or allocation: a review of the literature. *International Journal of Nursing Studies,* 37(3), 185 – 197

Richards, T. (1999) Patients' priorities – need to be assessed properly and taken into account. *BMJ,* 318, 277

Rogers, P. & Bullman, W. (1995) Prescription medicine compliance: a review of the baseline knowledge. A report of the National Council on Patient Information and Education. *Journal of Pharmacoepidemiology,* 2, 3 – 36

Roland, M. (2002) Length of consultations: Contract needs to enable doctors to offer first class care. *BMJ*, 325, 1241

Royal College of General Practitioners. (2006a) *General Practitioners with Special Interests*. Information sheet. London, RCGP

Royal College of General Practitioners. (2006b) *Key demographic statistics from UK General Practice.* London, RCGP

Royal College of General Practitioners. (2004) *General Practice Workload*. Information sheet no. 3. London, RCGP

Royal College of Physicians. (2007) *Acute medical care. The right person, in the right setting – first time.* Report of the Acute Medical Task Force. London, RCP

Royal Pharmaceutical Society of Great Britain (2005) *Independent prescribing marks a significant milestone for pharmacy.* Press release, 15th November 2005 (online) London, RPSGB. Available from: www.rpsgb.org (accessed December 2005)

Royal Pharmaceutical Society of Great Britain, Merck Sharp & Dohme. (1997) *From compliance to concordance: achieving shared goals in medicine taking.* London, Royal Pharmaceutical Society of Great Britain

Rubin, G., Bate, A., George, A., Shackley, P. & Hall, N. (2006) Preferences for access to the GP: a discrete choice experiment. *British Journal of General Practice,* 56, 743 – 748

Ryan, M. & Bate, A. (2001) Testing the assumption rationality , continuity and symmetrywhen applying discrete choice experiments in health care. *Applied Econ Letters,* 8, 59 - 63

Ryan, M., Gerard, K. & Amaya-Amaya, M. (2007) *Using Discrete Choice Experiments to Value Health and Health Care.* Netherlands, Springer

Ryan, M. (2004) Discrete choice experiments in health care. *BMJ,* 328, 360 – 361

Ryan, M. & San Miguel, F. (2004) Revisiting the axiom of completeness in health care. *Health Economics,* 12, 295 – 307

Ryan, M., McIntosh, E. & Shakley, P. (1998) Using conjoint analysis to assess consumer preferences in primary care: An application of the patient health card. *Health Expectations,* 1, 117 - 129

Rycroft-Malone, J., Fontenla, M., Bick, D. & Seers, K. (2008) Protocol-based care: impact on roles and service delivery. *Journal of Evaluation in Clinical Practice,* 14, 867 - 873

Salisbury, C., Montgomery, A., Simons, L., Sampson, F., Edwards, S., Baxter, H., Goodall, S., Smith, H., Lattimer, V. & Pickin, D. (2007a) Impact of advanced access on access, workload and continuity: controlled before-and-after and simulated-patient study. *British Journal of General Practice,* 57, 608 - 614

Salisbury, C., Goodall, S., Montgomery, A., Pickin, D., Edwards, S., Sampson, F., Simons, L. & Lattimer, V. (2007b) Does advanced access improve access to primary health care? Questionnaire survey of patients. *British Journal of General Practice,* 57, 615 – 621

Sampson, F., Pickin, M., O'Cathain, A., Goodall, S. & Salisbury, C. (2008) Impact of same-day appointments on patient satisfaction with general practice appointment systems. *British Journal of General Practice,* 58, 641 – 643

Say, R. & Thomson, R. (2003) The importance of patient preferences in treatment decisions - challenges for doctors. *BMJ*, 327, 542 – 545

Scott, A. (2002) Identifying and analysing dominant preferences in discrete choice experiments: An application in health care. *Journal of Economic Psychology,* 23, 383 – 398

Scott, A., Watson, M. & Ross, S. (2003) Eliciting preferences of the community for out of hours care provided by general practitioners: a stated discrete choice experiment. *Social Science and Medicine,* 56, 803 - 814

Sibbald, B. & Knight, R. (2008) Head to head: Should primary care be nurse led? *BMJ*, 337, a1157

Silverman, D. (1993) *Interpreting qualitative data: Methods for analysing talk, text and interaction.* London, Sage publications.

Siriwardena, N., Edwards, A., Campion, P., Freeman, A. & Elwyn, G. (2006) Involve the patient and pas the MRCGP: Investigating shared decision making in a consulting skills examination using a validated instrument. *British Journal of General Practice,* 56, 857 - 862

Stevenson, F., Cox, K., Britten, N., Dundar, Y. (2004) A systematic review of the research on communication between patients and health care professionals about medicines: the consequences for concordance. *Health Expectations,* 7, 235 – 245

Stewart, D., Johnson, G., Diack, H., Bond, C., McCaig, D., Cunnungham, I., Munro, K. & Pfleger, D. (2009) Cross sectional survey of Scottish general public's awareness of, views on, and attitudes toward non-medical prescribing. *The Annals of Pharmacotherapy,* 43, 1115 - 1121

Stewart, M., Brown, J., Donner, A., McWhinney, I., Oates, J., Weston, W. & Jordan, J. (2000) The impact of patient-centred care on outcomes. *Journal of Family Practice,* 49, 805 – 807

Strauss, A. & Corbin, J. (1998) *Basics of qualitative research. (*2nd edition). London, Sage publications

Street, D. & Burgess, L. (2007) *The construction of optimal stated choice experiments: Theory and methods.* New Jersey, John Wiley & Sons

Strickland-Hodge, B. (2008) Nurse prescribing: The elephant in the room? *Quality in Primary Care,* 16, 103 - 107

Tabachnick, B. & Fidell, L. (2007). *Using multivariate statistics* (5th edition). Boston, Pearson Education.

Tennison, I., Tovey, R., Flowers, J. & Hill, F. (2008) Chronic disease prevalence by age, sex and region in 2008. *Eastern Region Public Health Observatory (ERPHO).* (Online) Available from: http://www.erpho.org.uk/viewResource.aspx?id20574 (accessed 1st October 2010)

Thompson, M. & Nussbaum, R. (2000) Asking women to see nurses or unfamiliar physicians as part of a primary care design. *American Journal of Managed Care,* 6, 187 – 199

Tinelli, M., Ryan, M. & Bond, C. (2009) Patients' preferences for an increased pharmacist role in the management of drug therapy. *International Journal of Pharmacy Practice,* 17, 275 – 282

Tonna, A., Stewart, D., West, B. & McCaig, D. (2007) Pharmacist prescribing in the UK – a literature review of current practice and research. *Journal of Clinical Pharmacy and Therapeutics,* 32, 545 - 556

Turner, D., Tarrant, C., Windridge, K., Bryan, S., Boulton, M., Freeman, G. & Baker, R. (2007) Do patients value continuity of care in general practice? An investigation using stated preference discrete choice. *Journal of Health Services Research and Policy,* 12, 132 - 137

Vick, S. & Scott, A. (1998) What makes a perfect agent? A pilot study of patient preferences in the doctor patient relationship. *Jurnal of Health Economics,* 17, 587 - 606

Walbeehm, ET. (2005) Prescribing also means being accountable. Rapid response to *BMJ,* 331:1159doi:10.1136/bmj.331.7526.1159 (accessed online December 2005)

Wang, L. (2002) Big response to prescribing proposals. *Pharmaceutical Journal,* 269, 49

Wang, L. (2006) Support for non-medical prescribers. *Pharmaceutical Journal,* 276,147

Weiss, M. & Britten, N. (2003) What is concordance? *Pharmaceutical Journal*, 271, 493

Weiss, M., Fitzpatrick, R., Scott, D. & Goldacre, M. (1996) Pressures on the general practitioner and decisions to prescribe. *Family Practice*, 13, 432-438

Weiss, M. & Sutton, J. (2009) The changing nature of prescribing: pharmacists as prescribers and challenges to medical dominance. *Sociology of Health and Illness,* 13, 406-421

Willig, C. (2001). *Introducing qualitative research in psychology: Adventures in theory and method.* Maidenhead, Open University Press.

Wilson, A. (1985). Consultation length: general practitioners attitudes and practices. *British Medical Journal (Clinical Research Edition)*, 290, 1322 - 1324

Wilson, A. & Childs, S (2002). The relationship between consultation length, process and outcomes in general practice: a systematic review. *British Journal of General Practice,* 52, 1012 – 1020

Appendices

Appendix 1 – Phase 1

Appendix 1.1: Guide for HCP interviews

Semi-structured qualitative Questionnaire – final form: Health Care Professionals

Thank you for agreeing to take part in this study, which is looking the views of health care professionals on time and quality in general practice consultations. I am doing this study as part of a research project and am particularly interested in:

- How time in consultations is currently spent
- What health care professionals (HCPs) think about consultations and patient visits (in terms of both frequency of visits and duration)
- HCPs' perceptions of how time is currently used and how we may (if appropriate) change this to improve patient care, and,
- if it is more time that is required, what HCPs may consider giving up in order to achieve this goal

Before we start I would just like to clarify that you do not have to answer all of the questions. You can decline to participate in any or part of this study at any time. The interviews, if that's what I may call them, are all recorded (are you happy for that?) I should stress that any information you do give will be treated anonymously and all tapes will be securely stored at the University of Bath for a period of ten years after the completion of the study. In the meantime, all the tapes are coded and I will be the only person that knows which tape belongs to which interview. Similarly no-one will be able to identify your practice.

It is necessary that I inform you that I do have an ethical obligation to exercise a reasonable duty of care if I feel there is a potential risk of a practitioner causing harm, to either themselves or others. In such a circumstance I would act in accordance with the professional code of conduct for pharmacists.

I will start this interview by asking you a few questions for background purposes. This will be followed by some very general questions about your views and experiences of visits to your GP practice. Please bear in mind that there are no right or wrong answers as such – it is your views and thoughts that I am interested in. If you are unsure about something please do not be afraid to ask.

Are you happy with what I have told you so far? Good, right let's begin.

Occupation

Do you have any specialist areas of interest?

Do you work full time or part time? (If P/T how many hours a week approx.)

Finally, for this part, may I ask how old you are? (note sex of HCP also)

I would like you now to think specifically about your consultations (could focus specifically on recent surgery if necessary but check content was typical of a "normal" surgery in terms of acute and long term conditions).

- When you are running a surgery what do you find most satisfying? (*prompt for pt satisfaction, clinical challenge, interesting/unusual conditions, certain diseases/conditions and/or specialist areas of interest etc.)*

  (may need to explore some of the issues raised in more depth (here or later))

  (explore ideas regarding different conditions requiring different consultation lengths e.g. mental health vs. acute injuries; also first visits compared with subsequent ons;)

- What are the areas, within a consultation, that you get least satisfaction from and that you may consider a bit of a "heart sink" scenario? What, do you think, are the main reasons for these differences?

- When conducting consultations what would you say is your

consultation style?

(explore ideas around pt centredness, letting pt speak vs directing questions etc. and how this related to time in consultations whether conscious of actual time a consultation takes or let it run its natural course; is time directed by pt or HCP?)

- Do you feel your consultation style changes (slightly or markedly) depending upon the presenting condition/complaint? What about the actual patient, is knowing them likely to affect your style of consultation?

  (also explore ideas around the new contract and the possibility of the "tick box" culture focusing the consultation)

- Still thinking about consultations what do you feel is the biggest time waster? What, if anything, would you be willing to give up in a consultation because it has minimal impact on pt. care?

  (*Explore why this is and if there is another person (HCP or Other) that could/should pick up on this piece of work or whether it is just irrelevant; why is it done (GP contract; because we've always done it like that, etc.)*

- How long are your consultations currently. Is this always sufficient time? Do you ever feel you are hurrying a pt. along? It has been suggested that GPs feel that their patients do have enough time (because they do not "hurry" them out of consultations) however from the patient's perspective they know there is a waiting room full of people and thus feel pressurised to be quick irrespective of whether or not the GP is trying to hurry them…what are your feelings regarding this?

  (Explore what the GP would do with additional time if services were re-designed to provide more time and how this would contribute to improved pt. outcomes; also differences in when they feel stressed (perhaps due to personal circumstances or external influences vs. when they are "energised")

- What aspects of your consultations do you feel your patients like and/or find the most helpful?

- There has been work done that suggest it may be useful for patients, whilst sitting in the waiting room, to write down what they want from the consultation before they go in to see their GP. Would you find it helpful for a patient to have written down their concerns/questions/expectations before their appointment? Would this be more efficient and allow you to focus the consultation more?

- Thinking more about your general work now what do you consider are the main sources of time wasting within the practice? Are there any notable areas of inefficiency? What are the major areas you would like to consider for service re-design?
  (may need to probe further with practice manager(s) who may have stronger views on this; explore what these areas add to patient care as opposed to reconfiguration of how practice operates; consider frequency of visits to)

- Do you feel the nGMS has influenced how either your practice operates or how you conduct your consultations?
  (explore ideas around tick box culture vs. "hands on" pt care; what (if anything) targets and meeting pre determined criteria adds to pt. care; will publication of points be a benefit or a threat?)

- This next question takes a broader view and is about how we should best spend the limited amount of money that the NHS gets to spend on health care. How do you feel about offering more time with another health care professional other than a GP? E.g. if you were offered 20minutes with the nurse or a pharmacist rather then 10minutes with the GP, would this be a more efficient use of the limited resources?
  (If patient would like more time with their GP specifically explore

what 'extra' they get from a GP why they feel this would further improve the care they receive; explore what they would be willing to "give up"/"trade off" in order to have more time with their GP; do they always try and see "their" GP? What about other partners/locums etc.)

(explore ideas about non-pharmacological/non-drug interventions vs. drugs and the time involved in counseling eg BP vs. weight loss. (consider phrase such as: , for some conditions like heart problems, one way treat it is to ask people to change their diet and eat more healthily – another option is to give them a tablet. It is easy to give people a tablet but changing their diet may improve their health

- Considering service re-design what is the one thing you would like to alter (either locally or nationally)? What is preventing you from doing this at present?

Appendix 1.2: Guide for patient interviews

Semi-structured qualitative Questionnaire – final form 1: Patients

Thank you for agreeing to take part in this study, which is looking at peoples' views on time and quality in general practice. I am doing this study as part of a research project and am particularly interested in:

- What patients want from a consultation (that is, what is important to them)
- patients' perceptions of how time is currently used and how we may change this to improve patient care, and,
- if it is more time that is required, what "trade-offs" patients may be prepared to make in order to have more time with their Doctor (or another health care professional)

Before we start I would just like to clarify that you do not have to answer all of the questions. You can decline to participate in any or part of this study at any time. The interviews, if that's what I may call them, are all recorded (are you happy for that?) I should stress that any information you do give will be treated anonymously and all tapes will be securely stored at the University of Bath for a period of ten years after the completion of the study. In the mean time, all the tapes are coded and I will be the only person that knows which tape belongs to which interview. Similarly no-one will be able to identify the practice you are registered with so do not be worried that you will get you GP or nurse into trouble.

I will start by asking you a few questions for background purposes. This will be followed by some very general questions about your views and experiences of visits to your GP practice. Please bear in mind that there are no right or wrong answers as such – it is your views and thoughts that I am interested in. If you are unsure about something please do not be afraid to ask.

Are you happy with what I have told you so far? Good, right let's begin.

Occupation

Do you have any on-going medical conditions (such as asthma, diabetes or high blood pressure)

Approximately how many times a year do you visit your practice?

When was the last time you visited your GP practice?

Who did you see (e.g nurse. GP, phlebotomist etc.)

Was it to collect a prescription, have a test of some description, for a routine appointment, for a new/non-routine appointment or for something else?

(Can I ask what it was for?)

Finally, for this part, may I ask how old you are? (note sex of patient also)

I would like you now to think specifically about your consultations with your GP (if they have problems remembering and/or focusing ask them to consider their last appointment specifically).

- When you make an appointment to go to your GP, other than for routine appointments, what is it you would like/expect to get from that consultation?

  (*potential probes: information, reassurance, advice, emotional support, etc; (may need to explore some of the issues raised in more depth (here or later))*

  (explore ideas regarding different conditions requiring different consultation lengths e.g. mental health vs. acute injuries; also first visits compared with subsequent ones)

- What are your feelings regarding the content of these consultations in particular the information you received? Do you find it easy to understand or do your feel that there is too much to remember and too many confusing terms?

- Is there anything you feel you could be offered that would improve the care you receive?

- There has been work done that suggest it may be useful for patients, whilst sitting in the waiting room, to write down what they

want from the consultation before they go in to see their GP. Would you have found it helpful to have written down – before your appointment – the kinds of things you want to talk to the doctor about?

- Do you find coming to the surgery a bit of a palaver or do you quite like coming here? Do you ever have a chat with some of your neighbours / friends when you're here?' A lot of closed questions but follow them up a bit with prompts)
  (Prompt for comments regarding busy working people etc. if appropriate, problems of access/surgery times etc.; if appropriate prompt regarding telephone triage etc.)

Now I would like to move onto the time you have during a consultation:

- What are your feelings about the time you have during the consultation to express your views, ask questions and discuss your concerns? Do you think your GP's appointments are long enough for what you want to talk about?

- It has been suggested that GPs feel that their patients do have enough time (because they do not "hurry" them out of consultations) however from the patient's perspective they know there is a waiting room full of people and thus feel pressurised to be quick irrespective of whether or not the GP is trying to hurry them…what are your feelings regarding this? (*May wish to express this sentence: "* If the waiting room is really busy do you feel you have to hurry up your appointment (even if the doctor is not rushing you)?")

- Quite often there is a lot of information to remember. Would you like to get this information in one go (in a longer consultation) or have several shorter consultations?
  (prompt for views on receiving a chunk (amount?) of information

then having time to go away and think about it/research it then going back for more; preferences for type of information – leaflet, web address, etc. ask about how much information they want – and the types of things they want to know about (side effects, etc))

- How long, on average, is a consultation with your GP?
  (check against appointment times)

- How do you feel about 'check-ups'? Would you be happy to come in at regular intervals to have checks done "just in case" ie would you prefer to have frequent visits and checks to make sure everything is "ticking over" and be told each time "everything's fine" or would you rather wait until something goes wrong?"
  (Explore ideas around regular/frequent visits and peace of mind versus the hassle of frequent visits)

  This next question takes a broader view and is about how we should best spend the limited amount of money that the NHS gets to spend on health care. How do you feel about being offered more time with another health care professional other than a GP? E.g. if you were offered 20minutes with the nurse or a pharmacist rather then 10minutes with the GP, would this be a more efficient use of the limited resources?
  (If patient would like more time with their GP specifically explore what 'extra' they get from a GP why they feel this would further improve the care they receive; explore what they would be willing to "give up"/"trade off" in order to have more time with their GP; do they always try and see "their" GP? What about other partners/locums etc.)

- It is increasingly common for GPs nowadays to have to work against targets, e.g. to get their patient's blood pressure below a certain number/level. Do such targets/levels mean anything to you? Do you find it useful to have a "target/level" to aim for or are there

other things that are more important to you (e.g only taking 1 or 2 tablets each day rather than 3 or 4)? *might have to tailor this one to the particular patient's condition and relate the targets for that condition to what they think. So, if they have high blood pressure, tell them that the target is 150/90 (or whatever) but ask them what do they see as 'success' in getting their blood pressure treated?)*

(explore patients understanding of what targets are measured for their condition, what the values are and what it means (in terms of management and further interventions) if these values are high/low)

Appendix 1.3: Patient information sheet

Time and Quality in Primary Care: PhD Pharmacy Research Project
Department of Pharmacy & Pharmacology
University of Bath
Bath BA2 7AY
Student: Nikki Mayes
Tel: 07867 786817
Academic Supervisor: Dr Marjorie C Weiss
Email: m.weiss@bath.ac.uk

An Investigation into the views, of healthcare professionals and the general public, on time and quality of consultation in primary care: A PhD Research Project

My name is Nikki Mayes and I am a PhD student who is interested in finding out your views about the consultations and visits you make to your GP practice. Please read the following information which will tell you more about the research project, if anything is not clear, or if you would like more information, please feel free to contact me.

Thank you for reading this.

1. *What is the purpose of the study?*

The purpose of this study is to explore what patients, with certain medical conditions, think about their consultations and visits to their GP practice. I want to find out what you think about the number and length of your consultations, what you find helpful and what, if you could, you would like to alter. I would also like to ask you about the amount (and type) of information you are given on your condition and/or your medicines. A second part of the study will also consider what health care professionals (such as GPs and practice nurses) views are on this subject.

2. *Why have I been chosen?*

You are being invited because you are registered with (XXXXX) Practice which has agreed to help us with this project. The practice selected patients for us from their practice list who have been diagnosed with

either hypertension (high blood pressure) or rheumatoid arthritis. We hope to interview between approximately 20 patients with one or other of these conditions.

3. *Do I have to take part?*

It is up to you to decide whether or not to take part. If you do decide to take part you will need to sign a consent form (this will be explained/completed immediately before the interview). If you decide to take part you are still free to withdraw at any time and without giving a reason. The standard of care you that you receive from the practice will not be affected if you decide to withdraw at any time. Should you consent and then wish to withdraw from this study data collection will cease immediately and you can request that all data already collected is confidentially destroyed.

4. *What will happen during the study?*

You will be asked to complete an interview with me. I will arrange a mutually convenient time to interview you and the interview will take place in a consulting room at the GP practice. To save me from having to take lots of notes I would like to tape-record the interview. The interview should last approximately 45 minutes.

5. *What are the possible disadvantages and risks of taking part?*

You will not be asked for any sensitive information, so taking part in this study is unlikely to put you at any risk. All information coming from the interview will be anonymised and will be treated as confidential. Nothing coming out of the study will be identifiable to you as an individual. Your GP will be aware of your participation, but all information that is collected about you during the course of the research will be kept strictly confidential. Any reports arising from the study will have your name and address removed so that you cannot be identified.

6. *What are the possible advantages of taking part?*

I do not expect there to be any benefits for you, as an individual, in taking part. However the information you give me will help me understand what is important to patients during a consultation and what patients would like to get from a consultation. I hope this will help inform how we develop services to our patients in the future.

7. *What if something goes wrong?*

In the unlikely event you are harmed by taking part in this research project, there are no special compensation arrangements. If you wish to complain, or have any concerns about any aspect of the way you have been approached or treated during the course of this study, you can contact the lead researcher: Dr Marjorie C Weiss, Department of Pharmacy & Pharmacology, University of Bath, Bath BA2 7AY, telephone 01225 386787.

8. *What will happen to the results of the research study?*

I will use the findings of this research to produce a project report. I will also feed back the findings from this study, in a way so that you cannot be identified, to the staff at (XXXX) practice. If you are interested to know more about the results, please tell me when you are interviewed and I can provide you with a summary of the findings when the project is completed.

9. *Who is organising and funding this research?*

The study is being organised by the University of Bath, under the direction of Dr Marjorie Weiss and forms the first part of a PhD project.

10. *Who has reviewed this study?*

This study has been reviewed by the Gloucestershire Local Research Ethics Committee.

11. *Who do I contact for further information?*

If you have any other questions, please contact: Nikki Mayes (telephone 07867 786817; email: nicola.mayes1@btinternet.com).

12. What do I do now?

Please complete and return the enclosed reply slip, in the envelope provided by (DATE XXXX). I will contact you and arrange a mutually convenient time for the interview to take place.

Thank you for reading this information sheet.

Appendix 1.4: HCP information sheet

Time and Quality in Primary Care: PhD Pharmacy Research Project
Department of Pharmacy & Pharmacology
University of Bath
Bath BA2 7AY
Student: Nikki Mayes
Tel: 07867 786817
Academic Supervisor: Dr Marjorie C Weiss
Email: m.weiss@bath.ac.uk

An Investigation into the views, of healthcare professionals and the general public, on time and quality of consultation in primary care: A PhD Research Project

I am a PhD student who is interested in finding out your views about time and quality of consultations in primary care. Please read the following information which will tell you more about the research project, if anything is not clear, or if you would like more information, please feel free to contact me.

Thank you for reading this.

1. What is the purpose of the study?

The purpose of this study is to explore what health care professionals think about patient consultations and visits to GP practices (in terms of both frequency and duration). I want to find out what you think about the number and length of the consultations you conduct, what you find helpful and what, if you could, you would like to alter. I would also like to ask you about the amount (and type) of information you give to patients on their condition and/or their medicines. A second part of the study will also consider patient views on the subject.

2. Why have I been chosen?

Three practices have been purposefully selected (to give as broad a sample range as possible). Within each of these practices I would like to interview a range of health care professionals – GPs, practice nurses and, at least two, practice managers. I hope to interview 10 to 15 health care professionals in total.

3. Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will need to sign a consent form (this will be explained/completed immediately before the interview). If you decide to take part you are still free to withdraw at any time and without giving a reason.

4. What will happen during the study?

You will be asked to complete an interview with me. I will arrange a mutually convenient time to interview you and the interview will take place in a consulting room at the GP practice. To save me from having to take lots of notes I would like to tape-record the interview. The interview should last approximately 45 minutes.

5. What are the possible disadvantages and risks of taking part?

All information coming from the interview will be anonymised and will be treated as confidential. Nothing coming out of the study will be identifiable to you as an individual. Any reports arising from the study will have your name and address removed so that you cannot be identified.

6. *What are the possible advantages of taking part?*

I do not expect there to be any benefits for you, as an individual, in taking part. However the information you give me will help me understand what is important to health care professionals during a consultation and what they would like to get from a consultation. I hope this will help inform how we develop services to our patients in the future.

7. What if something goes wrong?

In the unlikely event you are harmed by taking part in this research project, there are no special compensation arrangements. If you wish to complain, or have any concerns about any aspect of the way you have been approached or treated during the course of this study, you can contact the lead researcher: Dr Marjorie C Weiss, Department of Pharmacy & Pharmacology, University of Bath, Bath BA2 7AY, telephone 01225 386787.

8. What will happen to the results of the research study?

I will use the findings of this research to produce a project report. I will also feed back the findings from this study, in a way so that you cannot be identified, to the staff at the practice. If you are interested to know more about the results, please tell me when you are interviewed and I can provide you with a summary of the findings when the project is completed.

9. Who is organising and funding this research?

The study is being organised by the University of Bath, under the direction of Dr Marjorie Weiss and forms the first part of a PhD project.

10. Who has reviewed this study?

This study has been reviewed by the Gloucestershire Local Research Ethics Committee.

11. Who do I contact for further information?

If you have any other questions, please contact: Nikki Mayes (telephone 07867 786817; email: nicola.mayes1@btinternet.com).

12. What do I do now?

Nothing – I will telephone you again in approximately 1 week to answer any further questions you may have and to arrange an appointment to interview you.

Thank you for reading this information sheet.

Appendix 1.5: Practice recruitment letter

Time and Quality in Primary Care: PhD Pharmacy Research Project
Department of Pharmacy & Pharmacology
University of Bath
Bath BA2 7AY
Academic Supervisor: Dr Marjorie C Weiss
Email: m.weiss@bath.ac.uk
Telephone: 01225 386787

Date

Dear (practice manager),

RE: An Investigation into the views, of healthcare professionals and the general public, on time and quality of consultation in primary care: A PhD Research Project

Following on from our conversation earlier today I am writing to ask for your help with a research project exploring the views of health care professionals and patients on time and quality in general practice. The project is being conducted as the first part of a PhD study at the University of Bath.

I would like to conduct interviews with a range of health care professionals (including GPs, practice nurses and practice managers) and patients. These interviews would explore their views on a variety of aspects, of consultations, such as:

- How time in consultations is currently spent,
- What aspects of consultations are useful and what aspects could be altered,
- What, if anything, would improve the quality of service currently provided
- What, if anything, could possibly be stopped as they have minimal impact on patient care

In total, I hope to interview approximately 15 health care professionals and 20 patients for the study. The interviews would occur at an appropriate time in the practice and to help me avoid taking lots of notes, I would like to audiotape the interviews. I anticipate they would take approximately 45 minutes. I would be grateful if you could respond, on behalf of the practice, by completing the attached reply slip.

Many thanks for your help regarding this matter.

Yours sincerely

Nikki Mayes
BPharm(hons) MRPharmS SP MSc

REPLY SLIP

Yes, <u>the practice would</u> be interested in helping with this research project:

Name:

Professional role:

Practice <u>stamp</u>:

Telephone:

Email:

Thank you for your help!

Please return in the stamped addressed envelope to:

Nikki Mayes
c/o Department of Pharmacy & Pharmacology
University of Bath
Claverton Down
Bath BA2 2AY
Tele. 01225 386787

Appendix 1.6: Patient recruitment letter

[Practice Headed Paper]

Date

Dear [Patient Name],

RE: An Investigation into the views, of healthcare professionals and the general public, on time and quality of consultation in primary care: A PhD Research Project

We are writing to ask for your help with a research project exploring what patients, and health care professionals, would like from consultations within their general practice. The project is being conducted as part of a PhD study at the University of Bath. The aim of the project is to discover the views of patients, and health care professionals, regarding how time is currently used during a consultation and what else, if anything, patients want/expect during a consultation.

The interviews will be conducted with patients who have either hypertension (high blood pressure) or rheumatoid arthritis and will be undertaken by the research pharmacist, Nikki Mayes. The patient interviews, for which we are requesting your help, would explore your views on a variety of aspects such as:

- the number of visits you have to make to the practice and how long they take,
- what aspects of your visits you find helpful and what aspects you would like to alter,
- the amount and type of information (about your condition and/or medicines) you receive and what further information you would like to receive

In total, it is hoped we will interview approximately 20 patients for the study. The interview would occur, in a consulting room, at the practice. To help avoid taking lots of notes all interviews will be tape-recorded with each interview lastingd approximately 45 minutes.

Enclosed is an information sheet that will provide you with further information about the study. If you would be interested in helping us with it please could you complete the enclosed reply slip and return to us, in the enclosed reply envelope, by XXXXXX. We will then arrange for Nikki to contact you.

Many thanks for your help and for taking the time to read this.

Yours sincerely,

Practice Manager

REPLY SLIP

Yes, I would be interested in helping with this research project:

Name:

Contact number:

Practice:

Comments (e.g. best time to contact)

Thank you for your help!

Please return in the stamped addressed envelope to:

XXXXX
Practice Manager
XXXXXXX
Tel: 0XXXXXXX

Appendix 1.7: HCP recruitment letter

Time and Quality in Primary Care: PhD Pharmacy Research Project
Department of Pharmacy & Pharmacology
University of Bath
Bath BA2 7AY
Academic Supervisor: Dr Marjorie C Weiss
Email: m.weiss@bath.ac.uk
Telephone: 01225 386787

Date

Dear (HCP name),

RE: An Investigation into the views, of healthcare professionals and the general public, on time and quality of consultation in primary care: A PhD Research Project

I am writing to ask for your help with a research project exploring what health care professionals, and patients, would like from consultations within the primary care setting. The project is being conducted as part of a PhD study at the University of Bath. The aim of the project is to discover the views of health care professionals, and patients, regarding how time is currently used during a consultation, what else should be provided and what, if anything, is currently undertaken but need not be or could be dealt with differently.

I would like to conduct interviews with a range of health care professionals including GPs, practice nurses and practice managers. These interviews would explore your views on a variety of aspects such as:

- How time in consultations is currently spent,
- What aspects of your consultations you find helpful and what aspects you would like to alter,

- What aspects of your consultations you feel your patients find helpful and what unfilled expectations you feel they may have
- What else you feel would benefit your patients
- What activities you feel you could possibly stop as they have minimal impact on patient care

In total, I hope to interview approximately 15 health care professionals. The interview would occur in the practice at a time to suit you, to help me avoid taking lots of notes, I would like to audiotape the interview. I anticipate the interview would take approximately 45 minutes and would be grateful if you could respond by completing the attached reply slip.

Yours sincerely

Nikki Mayes
BPharm(hons) MRPharmS SP MSc

REPLY SLIP

Yes, I would be interested in helping with this research project:

Name:

Professional role:

Practice:

Telephone:

Email:

Thank you for your help!

Please return in the stamped addressed envelope to:

Nikki Mayes
c/o Department of Pharmacy & Pharmacology
University of Bath
Claverton Down
Bath BA2 2AY
Tele. 01225 386787

Appendix 1.8: Practice manager recruitment letter

Time and Quality in Primary Care: PhD Pharmacy Research Project
Department of Pharmacy & Pharmacology
University of Bath
Bath BA2 7AY
Academic Supervisor: Dr Marjorie C Weiss
Email: m.weiss@bath.ac.uk
Telephone: 01225 386787

Date

Dear Practice Manager,

RE: An Investigation into the views, of healthcare professionals and the general public, on time and quality of consultation in primary care: A PhD Research Project

I am writing to ask for your help with a research project exploring what health care professionals, and patients, would like from consultations within the primary care setting. The project is being conducted as part of a PhD study at the University of Bath. The aim of the project is to discover the views of health care professionals, and patients, regarding how time is currently used, what else should be provided and what, if anything, is currently undertaken but need not be or could be dealt with differently.

I would like to conduct interviews with a range of health care professionals and patients and would be particularly interested in the views of practice managers on how time is currently utilised within GP practices. These interviews would explore your views on a variety of aspects such as:

- How time for consultations, with both GPs and practice nurses, is currently allocated, and how this time could be allocated differently
- What aspects of the consultation process you find useful, in terms of fulfilling national and local quality obligations, and what aspects you would like to alter

- What else, if anything, you feel the practice should provide that would benefit your patients
- What activities you feel you could possibly stop, or deliver differently, as they have minimal impact on patient care

In total, I hope to interview approximately 15 health care professionals (GPs, nurses and practice managers) and 20 patients. The purpose of this letter is to request the help of three practice managers who would be willing to take part in this study and be interviewed – all interviews will be treated anonymously. The interview would occur in the practice at a time to suit you. To help me avoid taking lots of notes, I would like to audiotape the interview and I anticipate it would take approximately 45 minutes I would be grateful if you could respond by completing the attached reply slip.

Yours sincerely

Nikki Mayes
BPharm(hons) MRPharmS SP MSc

REPLY SLIP

Yes, I would be interested in helping with this research project:

Name:

Practice:

Telephone:

Email:

Thank you for your help!

Please return in the stamped addressed envelope to:

Nikki Mayes
c/o Department of Pharmacy & Pharmacology
University of Bath
Claverton Down
Bath BA2 2AY
Tele. 01225 386787

Appendix 1.9: Ethics approval letter (phase 1)

Gloucestershire Research Ethics Committee
Gloucestershire Royal Hospital
Great Western Road
Gloucester
GL1 3NN

Tel: 01452 395726
Fax: 01452 395720

14 September 2005

Mrs Nicola Mayes
Castlemaine
191 Hewlett Road
Cheltenham
GL52 6UF

Dear Nikki

Full title of study: **An investigation into views, of healthcare professionals and the general public, on time and quality of consultations in primary care**
REC reference number: **05/Q2005/103**

Thank you for your application for ethical review, which was received on 14 September 2005. I can confirm that the application is valid and will be reviewed by the Ethics Committee at the meeting on 28 September 2005.

Meeting arrangements

The meeting will be held in the Reading Room, 2 College Lawn, Cheltenham on 28 September 2005. The Committee would find it helpful if you could attend the meeting to respond to any questions from members. Other key investigators and a representative of the sponsor are also welcome to attend. This may avoid the need to request further information after the meeting and enable the Committee to make a decision on the application more quickly.

If you are unable to attend the meeting the Committee will review the application in your absence.

The review of the application has been scheduled for 1:30pm. Would you please let me know whether or not you would be available to attend at this time. Please note that it is difficult to be precise about the timing as it will depend on the progress of the meeting. We would kindly ask you to be prepared to wait beyond the allocated time if necessary.

Committee meetings are occasionally attended by observers, who will have no vested interest in the applications under review or take any part in discussion. All observers are required to sign a confidentiality agreement.

Documents received

The documents to be reviewed are as follows:

Document	*Version*	*Date*
Application		31 August 2005
Investigator CV		(None Specified)
Protocol	1	31 August 2005
Covering Letter		31 August 2005
Participant Consent Form	1	31 August 2005
Practice Recruitment Letter	1	31 August 2005
Patient Letter	1	31 August 2005
HCP Recruitment Letter	1	31 August 2005
Health Care Professional Information Sheet	1	31 August 2005
Patient Topic Guide	1	31 August 2005
Health Care Professional Topic Guide	1	31 August 2005
Patient Information Sheet	1	31 August 2005

No changes may be made to the application before the meeting. If you envisage that changes might be required, you are advised to withdraw the application and re-submit it.

Notification of the Committee's decision

You will receive written notification of the outcome of the review within 10 working days of the meeting. The Committee will issue a final ethical opinion on the application within a maximum of 60 days from the date of receipt, excluding any time taken by you to respond fully to one request for further information or clarification after the meeting.

Site-specific issues

The application form indicates that the study is exempt from site-specific assessment (SSA). At this stage there is no need to complete Part C of the application form or to inform Local Research Ethics Committees (LRECs) about the research.

The Committee will consider the "SSA-exempt" status of the study when carrying out the ethical review, and this will be confirmed when I write to you after the meeting.

Research governance approval

SSA exemption applies only to the process of ethical review, not to the requirement to seek approval under the NHS Research Governance Framework from care organisations.

All researchers and local research collaborators who intend to participate in this study at NHS sites should notify the R&D Department for the relevant care organisation and seek research governance approval. You should advise researchers and local collaborators accordingly. Where the researcher or collaborator does not have a substantive contract with the care organisation, it may be necessary for an honorary contract to be issued before approval for the research can be given.

The research governance approval process may take place at the same time as the ethical review. Final approval from the care organisation will not be confirmed until after a favourable ethical opinion has been given by this Committee.

Further guidance is available at http://www.rdforum.nhs.uk/links/rdlinks.htm.

Communication with other bodies

All correspondence from the REC about the application will be copied to the research sponsor and to the R&D Department. It will be your responsibility to ensure that other

investigators, research collaborators and NHS care organisation(s) involved in the study are kept informed of the progress of the review, as necessary.

05/Q2005/103	Please quote this number on all correspondence

Yours sincerely

Hazel Gage

Hazel Gage
Committee Co-ordinator

E-mail: hazel.gage@glos.nhs.uk

Copy to:

Dr Marjorie Weiss, University of Bath
Mark Walker

Appendix 1.10: Patient information sheet

Time and Quality in Primary Care: PhD Pharmacy Research Project

Department of Pharmacy & Pharmacology
University of Bath
Bath BA2 7AY
Student: Nikki Mayes
Tel: 07867 786817
Academic Supervisor: Dr Marjorie C Weiss
Email: m.weiss@bath.ac.uk

An Investigation into the views, of healthcare professionals and the general public, on time and quality of consultation in primary care: A PhD Research Project

My name is Nikki Mayes and I am a PhD student who is interested in finding out your views about the consultations and visits you make to your GP practice. Please read the following information which will tell you more about the research project, if anything is not clear, or if you would like more information, please feel free to contact me.

Thank you for reading this.

1. *What is the purpose of the study?*

The purpose of this study is to explore what patients, with certain medical conditions, think about their consultations and visits to their GP practice. I want to find out what you think about the number and length of your consultations, what you find helpful and what, if you could, you would like to alter. I would also like to ask you about the amount (and type) of information you are given on your condition and/or your medicines. A second part of the study will also consider what health care professionals (such as GPs and practice nurses) views are on this subject.

2. *Why have I been chosen?*

You are being invited because you are registered with (XXXXX) Practice which has agreed to help us with this project. The practice selected patients for us from their practice list who have been diagnosed with either hypertension (high blood pressure) or rheumatoid arthritis. We hope

to interview between approximately 20 patients with one or other of these conditions.

3. *Do I have to take part?*

It is up to you to decide whether or not to take part. If you do decide to take part you will need to sign a consent form (this will be explained/completed immediately before the interview). If you decide to take part you are still free to withdraw at any time and without giving a reason. The standard of care you that you receive from the practice will not be affected if you decide to withdraw at any time. Should you consent and then wish to withdraw from this study data collection will cease immediately and you can request that all data already collected is confidentially destroyed.

4. *What will happen during the study?*

You will be asked to complete an interview with me. I will arrange a mutually convenient time to interview you and the interview will take place in a consulting room at the GP practice. To save me from having to take lots of notes I would like to tape-record the interview. The interview should last approximately 45 minutes.

5. *What are the possible disadvantages and risks of taking part?*

You will not be asked for any sensitive information, so taking part in this study is unlikely to put you at any risk. All information coming from the interview will be anonymised and will be treated as confidential. Nothing coming out of the study will be identifiable to you as an individual. Your GP will be aware of your participation, but all information that is collected about you during the course of the research will be kept strictly confidential. Any reports arising from the study will have your name and address removed so that you cannot be identified.

6. *What are the possible advantages of taking part?*

I do not expect there to be any benefits for you, as an individual, in taking part. However the information you give me will help me understand what is important to patients during a consultation and what patients would like to get from a consultation. I hope this will help inform how we develop services to our patients in the future.

7. What if something goes wrong?

In the unlikely event you are harmed by taking part in this research project, there are no special compensation arrangements. If you wish to complain, or have any concerns about any aspect of the way you have been approached or treated during the course of this study, you can contact the lead researcher: Dr Marjorie C Weiss, Department of Pharmacy & Pharmacology, University of Bath, Bath BA2 7AY, telephone 01225 386787.

8. What will happen to the results of the research study?

I will use the findings of this research to produce a project report. I will also feed back the findings from this study, in a way so that you cannot be identified, to the staff at (XXXX) practice. If you are interested to know more about the results, please tell me when you are interviewed and I can provide you with a summary of the findings when the project is completed.

9. Who is organising and funding this research?

The study is being organised by the University of Bath, under the direction of Dr Marjorie Weiss and forms the first part of a PhD project.

10. Who has reviewed this study?

This study has been reviewed by the Gloucestershire Local Research Ethics Committee.

11. Who do I contact for further information?

If you have any other questions, please contact: Nikki Mayes (telephone 07867 786817; email: nicola.mayes1@btinternet.com).

12. What do I do now?

Please complete and return the enclosed reply slip, in the envelope provided by (DATE XXXX). I will contact you and arrange a mutually convenient time for the interview to take place.

Thank you for reading this information sheet.

Appendix 1.11: Demographic results for phase 1

Table 74: Details of practice list sizes and patients with a diagnosis of hypertension or rheumatoid arthritis (for phase 1)

Practice	Age band	Total list size		BP register		RA register	
		Male	Female	Male	Female	Male	Female
1	**<40y**	3053	2855	7	6	2	1
1	**40-60y**	1585	1617	135	107	8	16
1	**>60y**	995	1157	356	458	7	23
2	**<40y**	1565	1543	8	5	0	1
2	**40-60y**	992	965	102	94	3	11
2	**>60y**	640	844	303	395	5	17
3	**<40y**	997	925	11	7	0	0
3	**40-60y**	739	702	91	72	3	10
3	**>60y**	527	598	305	239	4	10

Table 75: Blood Pressure patients: Details of patients approached and response rates for phase 1 of the programme of work

Pract.	Age band (gender)	No. Letters sent	No. "yes" replies	No. "no" replies	No resp.	Inter-viewed	Res. list
1	**<40y (M)**	4	0	0	4	0	0
1	**<40y (F)**	5	2	0	3	2	0
1	**40-60y (M)**	16	2	0	14	2	0
1	**40-60y (F)**	5	1	0	4	1	0
1	**>60y (M)**	0	0	0	0	0	0
1	**>60y (F)**	0	0	0	0	0	0
2	**<40y (M)**	6	1	0	5	1	0
2	**<40y (F)**	6	0	1	5	0	0
2	**40-60y (M)**	10	1	0	9	1	0
2	**40-60y (F)**	10	0	2	8	0	0
2	**>60y (M)**	4	1	1	2	1	0
2	**>60y (F)**	4	0	2	2	0	0
3	**<40y (M)**	3	0	1	2	0	0
3	**<40y (F)**	2	0	0	2	0	0
3	**40-60y (M)**	3	2	0	1	1	1
3	**40-60y (F)**	3	2	0	1	1	1
3	**>60y (M)**	3	3	0	0	2	1
3	**>60y (F)**	2	2	0	0	2	0
Totals		**86**	**17**	**7**	**62**	**14**	**3**

Table 76: Rheumatoid arthritis patients: Details of patients approached and response rates for phase 1 of the programme of work

Pract.	Age band (gender)	No. Letters sent	No. "yes" replies	No. "no" replies	No resp.	Inter-viewed	Res. list
1	**<40y (M)**	2	0	0	2	0	0
1	**<40y (F)**	1	0	0	1	0	0
1	**40-60y (M)**	4	0	0	4	0	0
1	**40-60y (F)**	6	0	1	5	0	0
1	**>60y (M)**	4	1	2	1	1	0
1	**>60y (F)**	4	0	3	1	0	0
2	**<40y (M)**	2	0	0	2	0	0
2	**<40y (F)**	1	1	0	0	1	0
2	**40-60y (M)**	3	0	0	3	0	0
2	**40-60y (F)**	5	0	2	3	0	0
2	**>60y (M)**	2	0	1	1	0	0
2	**>60y (F)**	3	0	1	2	0	0
3	**<40y (M)**	0	0	0	0	0	0
3	**<40y (F)**	0	0	0	0	0	0
3	**40-60y (M)**	2	0	0	2	0	0
3	**40-60y (F)**	4	1	0	3	1	0
3	**>60y (M)**	2	0	1	1	0	0
3	**>60y (F)**	8	2	1	5	2	0
Totals		**53**	**5**	**12**	**36**	**5**	**0**

Appendix 1.12: Project consent form

Department of Pharmacy & Pharmacology
University of Bath, Bath BA2 7AY
Academic Supervisor: Dr Marjorie C Weiss
Email: m.weiss@bath.ac.uk
Telephone: 01225 386787

Consent Form

An Investigation into the views, of healthcare professionals and the general public, on time and quality of consultation in primary care: A PhD Research Project (Researcher: Nikki Mayes)

Please initial each box:

1. I confirm that I have read and understood the information sheet (dated Octocer 2005, version 2) for the above study ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without my medical care or legal rights being affected. In the event that I wish to withdraw from this study data collection will cease immediately and I can request that all data is confidentially destroyed ☐
3. I am willing to allow access, only to those parts of my Health Records that are relevant to this study, by the research student (Nikki Mayes) but understand that strict confidentiality will be maintained ☐
4. I am willing to be audio taped as described in the Information Sheet and separate consent form ☐
5. I agree to take part in the above study ☐

Name of patient	Date	Signature

Researcher	Date	Signature

There will be 2 copies of the signed consent form: 1 for the patient; 1 for the researcher;

Appendix 1.13: Audio taping consent form

Department of Pharmacy & Pharmacology
University of Bath, Bath BA2 7AY
Academic Supervisor: Dr Marjorie C Weiss
Email: m.weiss@bath.ac.uk
Telephone: 01225 386787

Consent Form – Audio taping

An Investigation into the views, of healthcare professionals and the general public, on time and quality of consultation in primary care: A PhD Research Project (Researcher: Nikki Mayes)

Thank you for agreeing to take part in this study. The purpose of this sheet is to explain the audio taping process and to request your consent for this. In completing this form you need to be aware that:

- The reason for audio taping the interview is to avoid the need to take lots of notes – which is time consuming and may interrupt the interview process
- Each tape is coded with only me knowing the identity of the person recorded on the tape. On completion of the interview process the contents of each individual tape will be transcribed, word for word, into a document. These documents will also be coded to maintain anonymity.
- Direct quotations from the interviews may be used but will not be traceable to any individual participating in the study
- Anonymised tapes will be stored, for a period of 10 years from completion of the study, in a locked cupboard at the University of Bath. After this time they will be destroyed.

Please initial the box:

I confirm that I have read and understood the audio taping information sheet (dated October 2005) for the above study, and I am willing to allow the interview to be audio taped and transcribed as described in the information sheet ☐

Signed..... Date.....

Name (print) .....…...

Appendix 1.14: Coding Framework plus example quotes

1. **Patient needs and choice**
    a. **Patient centred care / patient focus / patient agenda**

GP: HCP 14:

Section 0, Paragraph 17, 105 characters.

"Give them every opportunity to say what they need to say, try not to interrupt so that is the first thing"

Practice manager: HCP 10:

Section 0, Paragraph 92, 232 characters.

"They have a very holistic approach to appointment lists in that they like to have the whole family registered with one particular doctor so they get the whole holistic approach of understanding the family background, what's going on"

Pharmacist: HCP 9:

Section 0, Paragraph 52, 345 characters.

"I do think there are some who require guidance and will lean on the health care profession for that guidance. There is obviously information available for patients now and it can't be a bad thing for them to know more about their conditions and more about their medicines as long as they realise their limitations and interpreting that knowledge."

Patient practice 1: Pt 11

Section 0, Paragraph 170, 73 characters.

"I suppose you think that they are the professionals so you are led by them"

    b. **Patient expectations / needs / satisfaction**
    c. **Patient choice**
    d. **Patient agenda**

2. **Time**
    a. **Access and appointment times**
    b. **Consultation duration**

c. **Consultation times**
d. **Extended opening**
e. **Frequency of visits**
f. **Waiting times**

3. **<u>Roles and Responsibilities</u>**
   a. **Chronic disease management**
   b. **Continuity of care**
   c. **New ways of working / practice size and mergers**
   d. **Non medical prescribing (NMP)**
   e. **Realtionships**
   f. **Task based nursing role**
   g. **Triage**
4. **<u>Quality</u>**
   a. **Communication**
   b. **Consultation outcomes**
   c. **Inefficiencies / “heart sinks” / job satisfaction**
   d. **Information and education**
   e. **Quality of care / nGMS / QOF**
5. **<u>Trade offs</u>**
6. **<u>Contradictions</u>**

Appendix 2 – Phase 2

Appendix 2.1: Ethics approval letter (phase 2)

NHS
National Research Ethics Service

Frenchay Research Ethics Committee
C/o North Bristol NHS Trust
Pembroke Room
Beaufort House
Southmead Hospital
Westbury-on-Trym
Bristol
BS10 5NB

Telephone: 0117 323 5211
Facsimile: 0117 323 2832

03 July 2009

Mrs Nicola Mayes
Castlemaine
191 Hewlett Rd
Cheltenham
Gloucestershire.
GL52 6UF

Dear Nikki

Study Title:	**Views of Patients' and Health care professionals on Time and Quality of Practice in Primary Care**
REC reference number:	**09/H0107/12**
Protocol number:	**1**

Thank you for your letter of 18 May 2009, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

For NHS research sites only, management permission for research ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research

governance arrangements. Guidance and forms for NHS permissions for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.
Where the only involvement of the NHS organisation is as a Participant Identification Centre, management permission for research is not required but the R&D office should be notified of the study. Guidance should be sought from the R&D office where necessary.

Sponsors are not required to notify the Committee of approvals from host organisations.

Other conditions specified by the REC

Please supply an updated HCP Questionnaire because there is a typographical error in the word prescriber on the last page.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Letter from supervisor		01 May 2009
Covering Letter		12 May 2009
Patient intro letter		
Healthcare Prof. intro letter		
Student CV		24 February 2009
GP/Consultant Information Sheets	1	24 February 2009
Compensation Arrangements		24 July 2008
Peer Review		27 January 2009
Covering Letter		24 February 2009
Protocol	1	31 January 2009
Investigator CV		14 January 2009
Application		
Response to Request for Further Information		18 May 2009
Questionnaire: Patients	2	01 April 2009
Questionnaire: HCP	3	29 June 2009
Covering Letter		29 June 2009
Response to Request for Further Information		

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Now that you have completed the application process please visit the National Research Ethics Service website > After Review

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views

known please use the feedback form available on the website.

The attached document *"After ethical review – guidance for researchers"* gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email referencegroup@nres.npsa.nhs.uk.

09/H0107/12	**Please quote this number on all correspondence**

Yours sincerely

Dr Mike Shere
Chair

Email: Anthony.Sack@nbt.nhs.uk

Enclosures: "After ethical review – guidance for researchers", *SL- AC2*

Copy to: *Professor Marjorie Weiss, University of Bath*
Gloucestershire R&D office

Appendix 2.2: *A priori* assumptions and question groupings (HCPs)

1 - Strongly agree

2 - Agree

3 - (neutral)

4 - Disagree

5 - Strongly disagree

GPwSIs vs generalists

1. The beauty of general practice is that you are a generalist. You don't have to specialise
2. One of the liberating aspects of recent changes in general practice is that you can specialise in an area that interests you

Skill mix and deskilling

1. The problem with specialising is that you deal with a narrow spectrum of conditions which means your skills in other areas do not develop
2. Chronic disease management will always be a key role for GPs to ensure they remain in touch with the breadth of general practice

3. GPs' skills should be targeted to the "serious" or "difficult" problems such as patients with complex co-morbidities
4. Nurses' skills should be used only for "routine" or "minor" problems
5. Nurses and doctors have overlapping skills which makes it possible for one to substitute for the other in these areas

Roles and Responsibilities

1. Non medically qualified prescribers must take clinical responsibility for their prescribing decisions
2. It is better to base clinical decisions on an intuitive assessment of a patient's condition than to be driven by protocols
3. Non medically qualified prescribers are safer prescribers than doctors because they follow protocols better

4. Routine health monitoring, irrespective of the presenting condition, is important to the overall well being and health of the patient
5. Measuring the patient's height, weight, blood pressure and peak flow, whether it is relevant to the condition or not, is a waste of time
6. It is bad clinical practice for one GP to meet all the health care needs of a patient
7. As healthcare becomes more complex safer clinical practice would suggest we need to have a team of people, with a range of skills, working effectively together
8. Delivery a patient's of complex care needs to be co-ordinated by a single individual but this does not need to be their GP
9. Even if a patient sees many health care professionals, the GPs should retain overall responsibility for their patients

Chronic disease management

1. All routine chronic disease management could be undertaken by an appropriately trained non medically qualified professional
2. All our routine chronic disease management is undertaken by the practice nurses (N/A to all)
3. If you offered routine chronic disease management at weekends you would have to have a GP present
4. There is no need to provide routine chronic disease management evenings/weekends
5. Friday to Monday is a long time for the general public to go without access to routine (not emergency) health care
6. Increasing surgery hours to include more evenings and weekends will not improve the overall health of the nation

Relationships and Continuity of care

1. Providing continuity of care to an individual patient is more time efficient because you can figure out what is wrong with the patient more quickly
2. Risk management is difficult if you have no personal knowledge of the patient

3. Effective IT systems mean providing continuity of care for patients is no longer necessary
4. It is easier to work as a locum because you are taking each patient's condition on face value without having to address any long standing psychosocial issues
5. Continuity of care is more important for routine chronic disease management than it is for acute / symptomatic conditions
6. It is better to have continuity of care than breadth of clinical expertise
7. The benefits of economies of scale, through practice mergers, outweigh any loss to continuity of care

QOF – clinical domains

1. Getting maximum QOF points just means you are an organised practice
2. QOF is a good thing because it drives good patient-focused clinical care
3. The time and energy spent obtaining QOF points is disproportionate to the patient benefits
4. QOF is a good use of my time because by reviewing lists of patients I may identify someone who has "slipped through the net"
5. I see QOF as guideline only and it does not constrain me as a health care professional
6. QOF targets mean it is hard to focus on the patient's reason for coming to see you
7. I like the structure that QOF provides because it is satisfying to know I have done everything I should for that patient

Prescribing (signing Rx and non-medical)

1. Non medical prescribers save GPs' time
2. Non medical prescribers save patients' time because they are able to see a healthcare professional sooner

3. a (nurses/pharmacists only): It is not worth completing the non medical prescriber course when you can just print off the prescription and get the GP to sign it
4. b (GPs only): It is not worth a nurse completing the non medical prescriber course when they can just print off the prescription and get the GP to sign it
5. You should only accept responsibility for signing an acute prescription if you have personally assessed the patient
6. It is acceptable for GPs to endorse a nurse's/pharmacists prescribing decision by signing the prescription without personally assessing the patient
7. Too much time is wasted having nurses/pharmacists hanging around just to get a prescription signed
8. As long as NMPs adhere to protocols I am happy for them to prescribe

Specialist clinics/Frequency of visits

1. Having patients return for additional visits to see different specialists is better than having a one-stop shop because they get the best patient care possible
2. It is better if patients can have all their routine chronic disease management done by one person in a single visit (even if this covers more than one clinical condition)
3. It is better to monitor each condition a patient has as a separate entity using appropriately trained specialists rather than trying to have one person who deals with everything
4. a (GPs only): I don't want nurses running chronic disease clinics for my patients because I like to have control over what my patients are doing
5. b. (Nurses/pharmacists) : I don't want other nurses running chronic disease clinics for my patients because I like to have control over what my patients are doing

6. We should provide routine chronic disease clinics evenings and weekends even if it means establishing a rota of nurses to run them

Consultation length / Pt. centred care

1. I like to give patients as much time as they feel they need even if it makes me run very late on my appointments
2. A good health care professional runs to time and knows how to end a consultation when he/she feels it is appropriate
3. Having longer appointments does not necessarily increase a patient's health outcomes
4. It is good medical practice to try and complete as many of the QOF targets as possible whilst you have the patient there, irrespective of why they came to see you

Appendix 2.3: *A priori* assumptions and question groupings (patients)

Skills and skill mix

1. Nurses are very good at practical things like dressings and taking bloods but I don't think they should diagnose what's wrong
2. Pharmacists know about supplying medicines but I don't think they should diagnose what's wrong
3. I do not mind which health care professional I see as long as they are adequately trained
4. GPs' skills should be targeted to the "serious" or "difficult" problems
5. Nurses' skills should be used only for "routine" or "minor" problems
6. I'm happy for nurses and doctors to substitute for each other in those areas where their skills overlap.

Continuity of care / relationships

1. Seeing the same health care professional each time is important to me even if it is for something routine or minor (such as measuring my blood pressure)
2. By keeping good information on computer systems there is no longer the need to always see the same health care professional
3. If I think I have something seriously wrong I want to see my usual GP even if it means I have to wait
4. The most important thing is to see any health care professional on the day you want rather than having to wait, even if it's for a minor or routine problem
5. Larger practices are more efficient and can provide better patient care
6. Big practices are too impersonal: I have to keep repeating the details of what is wrong with me to a different person on each visit

Patient centred care

1. It is better to see a GP that knows you as you are less likely to feel rushed during the consultation

2. Sometimes it feels like they are checking you over, for height, weight and blood pressure without actually listening to why you are there
3. Things like measuring my height, weight and blood pressure are important for them to keep an eye on my overall health

Prescribing (signing Rx and non-medical)

1. Nurses are very good at practical things like dressings and taking bloods but I don't think they should be able to prescribe medicines like a doctor does
2. Pharmacists are very good at supplying medicines but I don't think they should be able to prescribe medicines like a doctor does

Specialist clinics/Frequency of visits

1. I prefer to see a doctor who specialises in my condition(s) instead of seeing my usual GP for everything
2. It is better for the patient if they can have all their routine practice visits done in a single visit rather than having to return several times to see different people

Consultation length / time

1. I like to be seen within 10 to 15 minutes of my appointment time
2. I would not want to wait more than 60minutes after my appointment time
3. I would be happy to wait up to 60minutes after my appointment time for my usual GP because they know all about my condition
4. It is unreasonable to wait more than 15minutes for my appointment if my appointment is with any doctor who is available
5. If it is a minor or routine problem I would like to be able to just turn up and wait to see a health care professional rather than making an appointment
6. If it is a serious problem I would like to be able to just turn up and wait to see a health care professional rather than making an appointment

7. I think Friday to Monday is a long time to go without being able to see my doctor if I need to
8. If my doctor says he can only see me Monday to Friday between 9am and 5pm then I am happy to fit in with his schedule
9. It is important to me to have my appointments at times to suit me rather than to suit my practice

Appendix 2.4: Patient questionnaire

Time and Quality in Primary Care: PhD Pharmacy Research Project (N. Mayes)
Department of Pharmacy & Pharmacology
University of Bath, Bath BA2 7AY
Academic Supervisor: Professor Marjorie C Weiss
Email: m.weiss@bath.ac.uk; n.mayes@bath.ac.uk;
Telephone: 01225 386787

Time and Quality in Primary Care: Patient Questionnaire

What is this survey about?

This survey is about your experience of the services provided by the local NHS. Your views are important to help us to learn how well services work and how, you feel they can be improved. The questionnaire uses data and ideas generated from a previous study.

Who should complete the questionnaire? The questions should be answered by the person in whose name the appointment was made. If that person needs help to complete the questionnaire, the responses should be given from his/her point of view – not the point of view of the person who is helping. Unaccompanied under 18s are not included in this study and thus should not complete a questionnaire. The questionnaire is being handed to a random sample of patients who present to any GP practice across Gloucestershire. A related questionnaire has also been sent to all GPs and practice nurses across Gloucestershire and practice based pharmacists from Gloucestershire and further afield.

Completing the questionnaire - For each question please tick clearly inside one of the boxes using a black or blue pen. Please remember there are no right or wrong answers. It is simply your views and experiences that I am interested in. Don't worry if you make a mistake; simply cross out the mistake and put a tick in the correct box. The questionnaire should take 5-10minutes to complete.

Please do not write your name or address anywhere on the questionnaire.

Questions or help? If you have any queries about the questionnaire, please call the telephone number given at the top of this sheet. If you would like feedback on the results of the study please let me know. It should be available from October 2009. Your participation in this survey is entirely voluntary. Non-participation will not affect the care you receive from the NHS in any way. If you do not wish to take part, or you do not want to answer some of the questions, you do not have to give a reason. Please return all completed questionnaires, in the enclosed FREEPOST envelope by XXXX.

Your answers will be treated in confidence - All your responses will be confidential and anonymous. Neither you, nor your practice, will be identified by me now or at any time in the future. The research team will not know your details and will not be able to track you or obtain your details. Your practice will not know whom has/has not responded.

1 - Strongly agree 2 – Agree 3 – No opinion 4 – Disagree 5 – Strongly disagree

	Statement / question (1 – strongly agree to 5 – strongly disagree)	**1**	**2**	**3**	**4**	**5**
1	If it is a serious problem I would like to be able to just turn up at my practice and wait to see a health care professional rather than making an appointment.					
2	I think Friday to Monday is a long time to go without being able to see my doctor if I need to.					
3	I like to be seen within 10 to 15 minutes of my appointment time.					
4	The most important thing is to see any health care professional on the day you want rather than having to wait, even if it's for a minor or routine problem.					
5	I would be happy to wait up to 60 minutes after my appointment time to see my usual GP because he/she knows all about my condition.					
6	It is better for the patient if they can have all their routine practice visits done in a single visit rather than having to return several times to see different people.					
7	By keeping good information on computer systems there is no longer the need to always see the same health care professional.					
8	Big practices are too impersonal: I have to keep repeating the details of what is wrong with me to a different person on each visit.					
9	Pharmacists know about supplying medicines but I don't think they should diagnose what's wrong.					
10	It is better to see a GP that knows you as you are less likely to feel rushed during the consultation.					
11	I prefer to see a doctor who specialises in my condition(s) instead of seeing my usual GP for everything.					
12	Things like measuring my height, weight and blood pressure are important for my practice to keep an eye on my overall health.					

	Statement / question (1 – strongly agree to 5 – strongly disagree)	**1**	**2**	**3**	**4**	**5**
13	If my GP says he can only see me Monday to Friday between 9am and 5pm then I am happy to fit in with his schedule.					
14	Larger practices are more efficient and can provide better patient care.					
15	I would not want to wait more than 60 minutes after my appointment time.					
16	Pharmacists are very good at supplying medicines but I don't think they should prescribe medicines like a doctor does.					
17	Nurses are very good at practical things like dressings and taking bloods but I don't think they should diagnose what's wrong.					
18	Sometimes it feels like they are checking you over for height, weight and blood pressure without actually listening to why you are there.					
19	If I think I have something seriously wrong I want to see my usual GP -even if it means I have to wait.					
20	It is important to me to have my appointments at times to suit me rather than to suit my practice.					
21	Nurses' skills should be used only for "routine" or "minor" problems.					
22	I'm happy for nurses and doctors to substitute for each other in those areas where their skills overlap.					
23	Nurses are very good at practical things like dressings and taking bloods but I don't think they should prescribe medicines like a doctor does.					
24	If it is a minor or routine problem I would like to be able to just turn up and wait to see any health care professional rather than making an appointment.					

	Statement / question (1 – strongly agree to 5 – strongly disagree)	**1**	**2**	**3**	**4**	**5**
25	It is unreasonable to wait more than 15minutes for my appointment if my appointment is with any doctor who is available.					
26	Seeing the same health care professional each time is important to me even if it is for something routine or minor (such as measuring my blood pressure).					
27	I do not mind which health care professional I see as long as they are adequately trained.					
28	GPs' skills should be targeted to the "serious" or "difficult" problems only.					

About you:

1. Are you male or female? ☐ Male ☐ Female

2. What was your **year** of birth? (please write in) e.g. | 1 | 9 | 6 | 2 | | | | |

3. How old were you when you left full-time education?

   ☐ 16 years or less ☐ 17 or 18 years ☐ 19 years or over ☐ Still in full-time education

4. Do you work?

   ☐ Full Time ☐ Part Time ☐ Retired ☐ If you work part time, how many hours per week do you work? ……(hours)

5. Do you suffer from any long-term or chronic conditions (please tick all that apply)?

   ☐ No
   ☐ Diabetes
   ☐ Heart problems (e.g. high blood pressure, angina)
   ☐ Breathing problems (e.g. asthma, COPD)
   ☐ Stomach / Indigestion problems
   ☐ Bone / joint problems

☐ Depression

Other (please list) ……..……..

6. Do you take regular (every day) medication? ☐ Yes ☐ No

7. What are these medicines for (please tick all that apply)?

☐	None	☐	Heart problems (e.g. high blood pressure, angina)
☐	Diabetes	☐	Breathing problems (e.g. asthma, COPD)
☐	Bone / joint problems	☐	Stomach / Indigestion problems
☐	Depression	☐	Other (please list) ……...

……..

8. Overall, how would you rate your health during the past 4 weeks?

☐	Excellent	☐	Very good
☐	Good	☐	Fair
☐	Poor	☐	Very poor

Time and Quality in Primary Care: PhD Pharmacy Research Project (N. Mayes)
Department of Pharmacy & Pharmacology
University of Bath, Bath BA2 7AY
Academic Supervisor: Professor Marjorie C Weiss
Email: m.weiss@bath.ac.uk; n.mayes@bath.ac.uk;
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Gloucestershire NHS
Primary Care Trust

Time and Quality in Primary Care: Health Care Professionals' Questionnaire

What is this survey about?

This survey is about your views on how time is spent in primary care and the impact it has on patient care. It also considers new ways of working within the NHS (such as non medical prescribing and the quality outcomes framework (QOF)). Your views are important to help us understand how well services work and how, you feel, they can be improved. The questionnaire uses data and ideas generated from a previous qualitative study.

Who should complete the questionnaire? - The questions should be answered by the person to whom the envelope was addressed. The questionnaire has been sent to all GPs, practice nurses and practice based pharmacists working within Gloucestershire. Due to the relatively low numbers of pharmacists working within primary care the questionnaire will also be sent to practice based pharmacists in neighbouring PCTs. A related questionnaire is being sent to a random sample of patients within Gloucestershire.

Completing the questionnaire - For each question please tick clearly inside one of the boxes using a black or blue pen. Please remember there

are no right or wrong answers. It is simply your views and experiences that I am interested in. Don't worry if you make a mistake; simply cross out the mistake and put a tick in the correct box. All your responses will be confidential and anonymous. Neither you, nor your practice, will be identified by me now or at any time in the future. All data will be kept confidential. The questionnaire should take 5-10minutes to complete.

Please do not write your name or address anywhere on the questionnaire. Questions or help?- If you have any queries about the questionnaire, please call the telephone number given at the top of this sheet. If you would like feedback please let me know. It should be available from October 2009. Your participation in this survey is entirely voluntary. If you do not wish to take part, or you do not want to answer some of the questions, you do not have to give a reason.

Please return all completed questionnaires, in the enclosed FREEPOST envelope by xxxx

Strongly agree 2 – Agree 3 – No opinion 4 – Disagree 5 – Strongly disagree

	Statement / question (1 – strongly agree to 5 – strongly disagree)	**1**	**2**	**3**	**4**	**5**
1.	Increasing surgery hours to include more evenings and weekends will not improve the overall health of the nation					
2.	Effective IT systems mean providing continuity of care for patients is no longer necessary					
3.	It is better to have continuity of care than breadth of clinical expertise					
4.	Providing continuity of care to an individual patient is more time efficient because you can figure out what is wrong with the patient more quickly					
5.	The beauty of general practice is that you are a generalist. You don't have to specialise					
6.	It is good medical practice to try and complete as many of the QOF targets as possible whilst you have the patient there, irrespective of why they came to see you					
7.	Non medical prescribers save patients' time because they are able to see a health care professional sooner					
8.	All routine chronic disease management could be undertaken by an appropriately trained non medically qualified professional					
9.	A good health care professional runs to time and knows how to end a consultation when he/she feels it is appropriate					
10.	All our routine chronic disease management is undertaken by the practice nurses					
11.	The problem with specialising is that you deal with a narrow spectrum of conditions which means your skills in other areas do not develop					
12.	QOF is a good use of my time because by reviewing lists of patients I may identify someone who has "slipped through the net"					

	Statement / question (1 – strongly agree to 5 – strongly disagree)	**1**	**2**	**3**	**4**	**5**
13.	It is acceptable for GPs to endorse a nurse's/pharmacist's prescribing decision by signing the prescription without personally assessing the patient					
14.	Having longer appointments does not necessarily increase a patient's health outcomes					
15.	Delivery of complex care needs to a patient needs to be co-ordinated by a single individual. This does not need to be the GP					
16.	Non medically qualified prescribers must take clinical responsibility for their prescribing decisions					
17.	Nurses and doctors have overlapping skills that make it possible for one to substitute for the other in these areas					
18.	I like to give patients as much time as they feel they need even if it makes me run very late on my appointments					
19.	Getting maximum QOF points just means you are an organised practice					
20.	We should provide routine chronic disease clinics evenings and weekends even if it means establishing a rota of nurses to run them					
21. (a)	(**GPs only**): I don't want nurses running chronic disease clinics for my patients because I like to have control over what my patients are doing					
21. (b)	(**Nurses/pharmacists only**) : I don't want other nurses running chronic disease clinics for my patients because I like to have control over what my patients are doing					
22.	Nurses' skills should be used only for "routine" or "minor" problems					
23.	It is better if patients can have all their routine chronic disease management done by one person in a single visit (even if this covers more than one clinical condition)					

	Statement / question (1 – strongly agree to 5 – strongly disagree)	**1**	**2**	**3**	**4**	**5**
24.	Too much time is wasted having nurses/pharmacists hanging around just to get a prescription signed					
25.	QOF targets mean it is hard to focus on the patient's reason for coming to see you					
26.	Non medical prescribers save GPs' time					
27.	It is better to monitor each condition a patient has as a separate entity using appropriately trained specialists rather than trying to have one person who deals with everything					
28.	Even if a patient sees many health care professionals, the GPs should retain overall responsibility for their patients					
29.	GPs' skills should be targeted to the "serious" or "difficult" problems such as patients with complex co-morbidities					
30.	Non medically qualified prescribers are safer prescribers than doctors because they follow protocols better					
31.	Routine health monitoring, irrespective of the presenting condition, is important to the overall well-being and health of the patient					
32.	Continuity of care is more important for routine chronic disease management than it is for acute / symptomatic conditions					
33.	Chronic disease management will always be a key role for GPs to ensure they remain in touch with the breadth of general practice					
34.	One of the liberating aspects of recent changes in general practice is that you can specialise in an area that interests you					
35.	You should only accept responsibility for signing an acute prescription if you have personally assessed the patient					

	Statement / question (1 – strongly agree to 5 – strongly disagree)	**1**	**2**	**3**	**4**	**5**
36.	I see QOF as guideline only and it does not constrain me as a health care professional					
37.	It is better to base clinical decisions on an intuitive assessment of a patient's condition than to be driven by protocols					
38.	Having patients return for additional visits to see different specialists is better than having a one-stop shop because they get the best patient care possible					
39.	It is bad clinical practice for one GP to meet all the health care needs of a patient					
40.	There is no need to provide routine chronic disease management evenings/weekends					
41.	Risk management is difficult if you have no personal knowledge of the patient					
42.	It is easier to work as a locum because you are taking each patient's condition on face value without having to address any long standing psychosocial issues					
43.	QOF is a good thing because it drives good patient-focused clinical care					
44. (a)	**nurses/pharmacists only**: It is not worth completing the non medical prescriber course when you can just print off the prescription and get the GP to sign it					
44. (b)	**GPs only**: It is not worth a nurse completing the non medical prescriber course when they can just print off the prescription and get the GP to sign it					
45.	I like the structure that QOF provides because it is satisfying to know I have done everything I should for that patient					
46.	Friday to Monday is a long time for the general public to go without access to routine (<u>not</u> emergency) health care					

	Statement / question (1 – strongly agree to 5 – strongly disagree)	**1**	**2**	**3**	**4**	**5**
47.	Measuring the patient's height, weight, blood pressure and peak flow, whether it is relevant to the condition or not, is a waste of time					
48.	As healthcare becomes more complex safer clinical practice would suggest we need to have a team of people, with a range of skills, working effectively together					
49.	The benefits of economies of scale, through practice mergers, outweigh any loss to continuity of care					
50.	NMPs should only prescribe if they adhere to protocols					
51.	The time and energy spent obtaining QOF points is disproportionate to the patient benefits					
52.	If you offered routine chronic disease management at weekends you would have to have a GP present					

About you:

1. Are you male or female? ☐ Male ☐ Female

2. What was your **year** of birth? **(please enter)** | 1 | 9 | 6 | 2 | | | | |

3. Do you work?

☐ Full Time ☐ Part Time (How many hours per week do you work?..…….. (hours))

4. Which of the following best describes your **principal** employment?

☐ GP partner ☐ GP locum ☐ Salaried GP

☐ OOH GP ☐ Nurse ☐ Pharmacist

5. What is the approximate list size of the **principal** practice in which you work?

☐ <3,000 ☐ 3,000 – 4,999 ☐ 5,000 – 6,999

☐ 7,000 – 8,999 ☐ 9,000 – 10,999 ☐ ≥ 11,000

6. **Pharmacists / nurses only**: Are you a qualified Non Medical Prescriber (NMP)? YES / NO

7. In which locality do you work?

☐	Cheltenham	☐	Gloucester	☐	Stroud	☐	Forest of Dean
☐	Cotswolds	☐	Bristol	☐	Worcestershire		

Appendix 2.6: Practice recruitment letter

Gloucestershire NHS
Primary Care Trust

Time and Quality in Primary Care: PhD Pharmacy Research Project (N. Mayes)
Department of Pharmacy & Pharmacology
University of Bath
Bath BA2 7AY
Academic Supervisor: Professor Marjorie C Weiss
Email: m.weiss@bath.ac.uk; n.mayes@bath.ac.uk;
Telephone: 01225 386787

Dear (practice manager),

RE: An Investigation into the views, of healthcare professionals and the general public, on time and quality of consultation in primary care: A PhD Research Project

Following on from our conversation earlier today I am writing to ask for your help with a research project exploring what patients, and health care professionals, would like from consultations within their general practice. The project is being conducted as part of a PhD study at the University of Bath. The aim of the project is to discover the views of patients, and health care professionals, regarding how time is currently used during a consultation and what else, if anything, patients want / expect during a consultation.

I would be grateful if a member of your reception staff could prospectively hand out questionnaires to approximately 40 patients who arrive, consecutively at the practice, for an appointment with either the GP, nurse or pharmacist. The researchers will not know who was / was not handed questionnaires and there will be no follow-up of patients. Each questionnaire will be accompanied by a FREEPOST envelope for return of the questionnaire. It has been estimated that the questionnaire will take approximately 5-10 minutes to complete. IN line with ethical approval all unaccompanied under 18's should be excluded from the study and NOT handed a questionnaire to complete. These are the only exemptions.

I have enclosed a copy of the questionnaire for your information. If you would like further information please feel free to contact me.

I would be grateful if you could confirm in writing, either via a letter or email (to either the address above or nicola.mayes@glos.nhs.uk) your willingness, or not, to participate in this project.

Many thanks for your help and for taking the time to read this.

Yours sincerely,

Nikki Mayes, Pharmacist, Gloucestershire PCT

Appendix 2.7: HCP responses to individual questions

Table 77: HCP responses to individual questions

	Strongly agree	Agree	No Opinion	Disagree	Strongly Disagree	Total	Missing
Q1: Increasing surgery hours to include more evenings and weekends will not improve the overall health of the nation	118	103	26	45	13	305	1
	38.7%	33.8%	8.5%	14.8%	4.3%		
Q2: Effective IT systems mean providing continuity of care for patients is no longer necessary	7	8	13	103	172	303	3
	2.3%	2.6%	4.3%	34.0%	56.8%		
Q3: It is better to have continuity of care than breadth of clinical expertise	9	70	119	90	14	302	4
	3.0%	23.2%	39.4%	29.8%	4.6%		
Q4: Providing continuity of care to an individual patient is more time efficient because you can figure out what is wrong with the patient more quickly	75	166	41	16	5	303	3
	24.8%	54.8%	13.5%	5.3%	1.7%		
Q5: The beauty of general practice is that you are a generalist. You don't have to specialise	68	104	57	61	14	304	2
	22.4%	34.2%	18.8%	20.1%	4.6%		

	Strongly agree	Agree	No Opinion	Disagree	Strongly Disagree	Total	Missing
Q6: It is good medical practice to try and complete as many of the QOF targets as possible whilst you have the patient there, irrespective of why they came to see you	9	62	54	124	56	305	1
	3.0%	20.3%	17.7%	40.7%	18.4%		
Q7: Non medical prescribers save patients' time because they are able to see a health care professional sooner	15	95	85	82	27	304	2
	4.9%	31.3%	28.0%	27.0%	8.9%		
Q8: All routine chronic disease management could be undertaken by an appropriately trained non medically qualified professional	21	80	24	100	78	303	3
	6.9%	26.4%	7.9%	33.0%	25.7%		
Q9: A good health care professional runs to time and knows how to end a consultation when he/she feels it is appropriate	14	128	45	93	22	302	4
	4.6%	42.4%	14.9%	30.8%	7.3%		
Q10: All our routine chronic disease management is undertaken by the practice nurses	44	104	34	93	28	303	3
	14.5%	34.3%	11.2%	30.7%	9.2%		
Q11: The problem with specialising is that you deal with a narrow spectrum of conditions which means your skills in other areas do not develop	52	154	36	57	6	305	1
	17.0%	50.5%	11.8%	18.7%	2.0%		

	Strongly agree	Agree	No Opinion	Disagree	Strongly Disagree	Total	Missing
Q12: QOF is a good use of my time because by reviewing lists of patients I may identify someone who has "slipped through the net"	17	142	68	57	19	303	3
	5.6%	46.9%	22.4%	18.8%	6.3%		
Q13: It is acceptable for GPs to endorse a nurse's/pharmacist's prescribing decision by signing the prescription without personally assessing the patient	29	150	54	49	18	300	6
	9.7%	50.0%	18.0%	16.3%	6.0%		
Q14: Having longer appointments does not necessarily increase a patient's health outcomes	30	150	48	66	11	305	1
	9.8%	49.2%	15.7%	21.6%	3.6%		
Q15: Delivery of complex care needs to a patient needs to be co-ordinated by a single individual. This does not need to be the GP	18	143	63	60	18	302	4
	6.0%	47.4%	20.9%	19.9%	6.0%		
Q16: Non medically qualified prescribers must take clinical responsibility for their prescribing decisions	145	131	15	9	4	304	2
	47.7%	43.1%	4.9%	3.0%	1.3%		
Q17: Nurses and doctors have overlapping skills that make it possible for one to substitute for the other in these areas	27	139	52	64	17	299	7
	9.0%	46.5%	17.4%	21.4%	5.7%		

	Strongly agree	Agree	No Opinion	Disagree	Strongly Disagree	Total	Missing
Q18: I like to give patients as much time as they feel they need even if it makes me run very late on my appointments	20	95	57	110	21	303	3
	6.6%	31.4%	18.8%	36.3%	6.9%		
Q19: Getting maximum QOF points just means you are an organised practice	28	99	52	100	25	304	2
	9.2%	32.6%	17.1%	32.9%	8.2%		
Q20: We should provide routine chronic disease clinics evenings and weekends even if it means establishing a rota of nurses to run them	9	37	47	116	92	301	5
	3.0%	12.3%	15.6%	38.5%	30.6%		
Q21a (GPs only): I don't want nurses running chronic disease clinics for my patients because I like to have control over what my patients are doing	1	4	27	81	62	175	1
	0.6%	2.3%	15.4%	46.3%	35.4%		
Q21b (Nurses/Pharm. only): I don't want other nurses running chronic disease clinics for my patients because I like to have control over what my patients are doing	1	21	21	56	29	128	2
	0.8%	16.4%	16.4%	43.8%	22.7%		
Q22: Nurses' skills should be used only for "routine" or "minor" problems	9	16	20	150	108	303	3
	3.0%	5.3%	6.6%	49.5%	35.6%		

	Strongly agree	Agree	No Opinion	Disagree	Strongly Disagree	Total	Missing
Q23: It is better if patients can have all their routine chronic disease management done by one person in a single visit (even if this covers more than one clinical condition)	44	159	32	51	18	304	2
	14.5%	52.3%	10.5%	16.8%	5.9%		
Q24: Too much time is wasted having nurses / pharmacists hanging around just to get a prescription signed	61	115	67	47	14	304	2
	20.1%	37.8%	22.0%	15.5%	4.6%		
Q25: QOF targets mean it is hard to focus on the patient's reason for coming to see you	39	105	45	94	22	305	1
	12.8%	34.4%	14.8%	30.8%	7.2%		
Q26: Non medical prescribers save GPs' time	49	143	66	36	9	303	3
	16.2%	47.2%	21.8%	11.9%	3.0%		
Q27: It is better to monitor each condition a patient has as a separate entity using appropriately trained specialists rather than trying to have one person who deals with everything	12	52	58	138	43	303	3
	4.0%	17.2%	19.1%	45.5%	14.2%		
Q28: Even if a patient sees many health care professionals, the GPs should retain overall responsibility for their patients	104	146	31	18	4	303	3
	34.3%	48.2%	10.2%	5.9%	1.3%		

	Strongly agree	Agree	No Opinion	Disagree	Strongly Disagree	Total	Missing
Q29: GPs' skills should be targeted to the "serious" or "difficult" problems such as patients with complex co-morbidities	48	144	46	56	10	304	2
	15.8%	47.4%	15.1%	18.4%	3.3%		
Q30: Non medically qualified prescribers are safer prescribers than doctors because they follow protocols better	18	47	85	102	53	305	1
	5.9%	15.4%	27.9%	33.4%	17.4%		
Q31: Routine health monitoring, irrespective of the presenting condition, is important to the overall well-being and health of the patient	41	149	62	40	13	305	1
	13.4%	48.9%	20.3%	13.1%	4.3%		
Q32: Continuity of care is more important for routine chronic disease management than it is for acute / symptomatic conditions	49	138	40	61	15	303	3
	16.2%	45.5%	13.2%	20.1%	5.0%		
Q33: Chronic disease management will always be a key role for GPs to ensure they remain in touch with the breadth of general practice	37	172	61	28	3	301	5
	12.3%	57.1%	20.3%	9.3%	1.0%		
Q34: One of the liberating aspects of recent changes in general practice is that you can specialise in an area that interests you	23	134	92	46	9	304	2
	7.6%	44.1%	30.3%	15.1%	3.0%		

	Strongly agree	Agree	No Opinion	Disagree	Strongly Disagree	Total	Missing
Q35: You should only accept responsibility for signing an acute prescription if you have personally assessed the patient	46	80	47	114	15	302	4
	15.2%	26.5%	15.6%	37.7%	5.0%		
Q36: I see QOF as guideline only and it does not constrain me as a health care professional	45	155	37	56	8	301	5
	15.0%	51.5%	12.3%	18.6%	2.7%		
Q37: It is better to base clinical decisions on an intuitive assessment of a patient's condition than to be driven by protocols	38	128	81	50	4	301	5
	12.6%	42.5%	26.9%	16.6%	1.3%		
Q38: Having patients return for additional visits to see different specialists is better than having a one-stop shop because they get the best patient care possible	6	68	92	108	26	300	6
	2.0%	22.7%	30.7%	36.0%	8.7%		
Q39: It is bad clinical practice for one GP to meet all the health care needs of a patient	10	22	68	144	56	300	6
	3.3%	7.3%	22.7%	48.0%	18.7%		
Q40: There is no need to provide routine chronic disease management evenings/weekends	87	105	41	57	11	301	5
	28.9%	34.9%	13.6%	18.9%	3.7%		

	Strongly agree	Agree	No Opinion	Disagree	Strongly Disagree	Total	Missing
Q41: Risk management is difficult if you have no personal knowledge of the patient	57	151	40	42	8	298	8
	19.1%	50.7%	13.4%	14.1%	2.7%		
Q42: It is easier to work as a locum because you are taking each patient's condition on face value without having to address any long standing psychosocial issues	11	42	78	118	46	295	11
	3.7%	14.2%	26.4%	40.0%	15.6%		
Q43: QOF is a good thing because it drives good patient-focused clinical care	11	111	83	72	23	300	6
	3.7%	37.0%	27.7%	24.0%	7.7%		
Q44a (Nurses/Pharm. only): It is not worth completing the non medical prescriber course when you can just print off the prescription and get the GP to sign it	1	21	21	56	29	128	2
	0.8%	16.4%	16.4%	43.8%	22.7%		
Q44b (GPs only): It is not worth completing the non medical prescriber course when you can just print off the prescription and get the GP to sign it	4	15	22	87	46	174	2
	2.3%	8.6%	12.6%	50.0%	26.4%		
Q45: I like the structure that QOF provides because it is satisfying to know I have done everything I should for that patient	7	97	92	73	31	300	6
	2.3%	32.3%	30.7%	24.3%	10.3%		

	Strongly agree	Agree	No Opinion	Disagree	Strongly Disagree	Total	Missing
Q46: Friday to Monday is a long time for the general public to go without access to routine (not emergency) health care	5	27	25	134	112	303	3
	1.7%	8.9%	8.3%	44.2%	37.0%		
Q47: Measuring the patient's height, weight, blood pressure and peak flow, whether it is relevant to the condition or not, is a waste of time	10	47	62	149	33	301	5
	3.3%	15.6%	20.6%	49.5%	11.0%		
Q48: As healthcare becomes more complex safer clinical practice would suggest we need to have a team of people, with a range of skills, working effectively together	80	173	37	6	2	298	8
	26.8%	58.1%	12.4%	2.0%	0.7%		
Q49: The benefits of economies of scale, through practice mergers, outweigh any loss to continuity of care	1	15	83	117	81	297	9
	0.3%	5.1%	27.9%	39.4%	27.3%		
Q50: NMPs should only prescribe if they adhere to protocols	56	129	57	52	5	299	7
	18.7%	43.1%	19.1%	17.4%	1.7%		
Q51: The time and energy spent obtaining QOF points is disproportionate to the patient benefits	44	108	83	55	10	300	6
	14.7%	36.0%	27.7%	18.3%	3.3%		

	Strongly agree	Agree	No Opinion	Disagree	Strongly Disagree	Total	Missing
Q52: If you offered routine chronic disease management at weekends you would have to have a GP present	21	84	38	117	42	302	4
	7.0%	27.8%	12.6%	38.7%	13.9%		

Appendix 2.8: Frequency analysis of the responses to groups of questions within the *a priori* assumptions (HCPs)

Table 78: Attitudes towards the *a priori* assumptions

Assumption i:	**Generalism versus specialism**				
Question 5:	The beauty of general practice is that you are a generalist. You don't have to specialise				
Question 34:	One of the liberating aspects of recent changes in general practice is that you can specialise in an area that interests you				
	Percentage (%) response rate				
	Strongly agree	**Agree**	**No opinion**	**Disagree**	**Strongly Disagree**
	14.9%	38.9%	24.3%	17.5%	3.8%
Assumption ii:	**Skill mix and deskilling**				
Question 11:	The problem with specialising is that you deal with a narrow spectrum of conditions which means your skills in other areas do not develop				
Question 33:	Chronic disease management will always be a key role for GPs to ensure they remain in touch with the breadth of general practice				
Question 29:	GPs' skills should be targeted to the "serious" or "difficult" problems such as patients with complex co-morbidities				
Question 22:	Nurses' skills should be used only for "routine" or "minor" problems				
Question 17:	Nurses and doctors have overlapping skills that make it possible for one to substitute for the other in these areas				
	Percentage (%) response rate				
	Strongly agree	**Agree**	**No opinion**	**Disagree**	**Strongly Disagree**
	11.3%	40.8%	14.1%	23.1%	9.3%

Assumption iii:	**Roles and Responsibilities**				
Question 16:	Non medically qualified prescribers must take clinical responsibility for their prescribing decisions				
Question 37:	It is better to base clinical decisions on an intuitive assessment of a patient's condition than to be driven by protocols				
Question 30:	Non medically qualified prescribers are safer prescribers than doctors because they follow protocols better				
Question 31:	Routine health monitoring, irrespective of the presenting condition, is important to the overall well-being and health of the patient				
Question 47:	Measuring the patient's height, weight, blood pressure and peak flow, whether it is relevant to the condition or not, is a waste of time				
Question 39:	It is bad clinical practice for one GP to meet all the health care needs of a patient				
Question 48:	As healthcare becomes more complex safer clinical practice would suggest we need to have a team of people, with a range of skills, working effectively together				
Question 15:	Delivery of complex care needs to a patient needs to be co-ordinated by a single individual. This does not need to be the GP				
Question 28:	Even if a patient sees many health care professionals, the GPs should retain overall responsibility for their patients				
	Percentage (%) response rate				
	Strongly agree	**Agree**	**No opinion**	**Disagree**	**Strongly Disagree**
	16.8%	35.8%	18.3%	21.0%	6.8%

Assumption iv:	**Chronic disease management**				
Question 8:	All routine chronic disease management could be undertaken by an appropriately trained non medically qualified professional				
Question 10:	All our routine chronic disease management is undertaken by the practice nurses				
Question 52:	If you offered routine chronic disease management at weekends you would have to have a GP present				
Question 40:	There is no need to provide routine chronic disease management evenings/weekends				
Question 46:	Friday to Monday is a long time for the general public to go without access to routine (not emergency) health care				
Question 1:	Increasing surgery hours to include more evenings and weekends will not improve the overall health of the nation				
	Percentage (%) response rate				
	Strongly agree	**Agree**	**No opinion**	**Disagree**	**Strongly Disagree**
	16.1%	27.4%	10.2%	29.7%	15.5%

Assumption v:	**Relationships and continuity of care**				
Question 4:	Providing continuity of care to an individual patient is more time efficient because you can figure out what is wrong with the patient more quickly				
Question 41:	Risk management is difficult if you have no personal knowledge of the patient				
Question 2:	Effective IT systems mean providing continuity of care for patients is no longer necessary				
Question 42:	It is easier to work as a locum because you are taking each patient's condition on face value without having to address any long standing psychosocial issues				
Question 32:	Continuity of care is more important for routine chronic disease management than it is for acute / symptomatic conditions				
Question 3:	It s better to have continuity of care than breadth of clinical expertise				
Question 49:	The benefits of economies of scale, through practice mergers, outweigh any loss to continuity of care				
	Percentage (%) response rate				
	Strongly agree	**Agree**	**No opinion**	**Disagree**	**Strongly Disagree**
	9.8%	27.5%	19.3%	25.5%	15.9%

Assumption vi:	**The Quality Outcome Framework (QOF)**				
Question 19:	Getting maximum QOF points just means you are an organised practice				
Question 43:	QOF is a good thing because it drives good patient-focused clinical care				
Question 51:	The time and energy spent obtaining QOF points is disproportionate to the patient benefits				
Question 12:	QOF is a good use of my time because by reviewing lists of patients I may identify someone who has “slipped through the net”				
Question 36:	I see QOF as guideline only and it does not constrain me as a health care professional				
Question 25:	QOF targets mean it is hard to focus on the patient’s reason for coming to see you				
Question 45:	I like the structure that QOF provides because it is satisfying to know I have done everything I should for that patient				
	Percentage (%) response rate				
	Strongly agree	**Agree**	**No opinion**	**Disagree**	**Strongly Disagree**
	8.9%	38.1%	21.5%	23.7%	6.4%

Assumption vii:	**Prescribing and non-medical Prescribing (NMP)**				
Question 26:	Non medical prescribers save GPs' time				
Question 7:	Non medical prescribers save patients' time because they are able to see a health care professional sooner				
Question 44:	**nurses/pharmacists only**: It is not worth completing the non medical prescriber course when you can just print off the prescription and get the GP to sign it **GPs only**: It is not worth a nurse completing the non medical prescriber course when they can just print off the prescription and get the GP to sign it				
Question 35:	You should only accept responsibility for signing an acute prescription if you have personally assessed the patient				
Question 13:	It is acceptable for GPs to endorse a nurse's/pharmacist's prescribing decision by signing the prescription without personally assessing the patient				
Question 24:	Too much time is wasted having nurses/pharmacists hanging around just to get a prescription signed				
Question 50:	NMPs should only prescribe if they adhere to protocols				
	Percentage (%) response rate				
	Strongly agree	**Agree**	**No opinion**	**Disagree**	**Strongly Disagree**
	12.3%	35.3%	19.2%	23.6%	8.2%

Assumption viii:	**Specialist clinics and frequency of visits**				
Question 38:	Having patients return for additional visits to see different specialists is better than having a one-stop shop because they get the best patient care possible				
Question 23:	It is better if patients can have all their routine chronic disease management done by one person in a single visit (even if this covers more than one clinical condition)				
Question 27:	It is better to monitor each condition a patient has as a separate entity using appropriately trained specialists rather than trying to have one person who deals with everything				
Question 21:	(**GPs only**): I don't want nurses running chronic disease clinics for my patients because I like to have control over what my patients are doing (**Nurses/pharmacists only**) : I don't want other nurses running chronic disease clinics for my patients because I like to have control over what my patients are doing				
Question 20:	We should provide routine chronic disease clinics evenings and weekends even if it means establishing a rota of nurses to run them				
	Percentage (%) response rate				
	Strongly agree	**Agree**	**No opinion**	**Disagree**	**Strongly Disagree**
	4.7%	22.3%	18.0%	35.9%	17.9%

Assumption ix:	**Consultation duration and patient centred care**				
Question 18:	I like to give patients as much time as they feel they need even if it makes me run very late on my appointments				
Question 9:	A good health care professional runs to time and knows how to end a consultation when he/she feels it is appropriate				
Question 14:	Having longer appointments does not necessarily increase a patient's health outcomes				
Question 6:	It is good medical practice to try and complete as many of the QOF targets as possible whilst you have the patient there, irrespective of why they came to see you				
	Percentage (%) response rate				
	Strongly agree	**Agree**	**No opinion**	**Disagree**	**Strongly Disagree**
	6.0%	35.5%	16.7%	32.1%	9.0%

Appendix 2.9: Questions with a low correlation coefficient (subsequently deleted from the analysis)

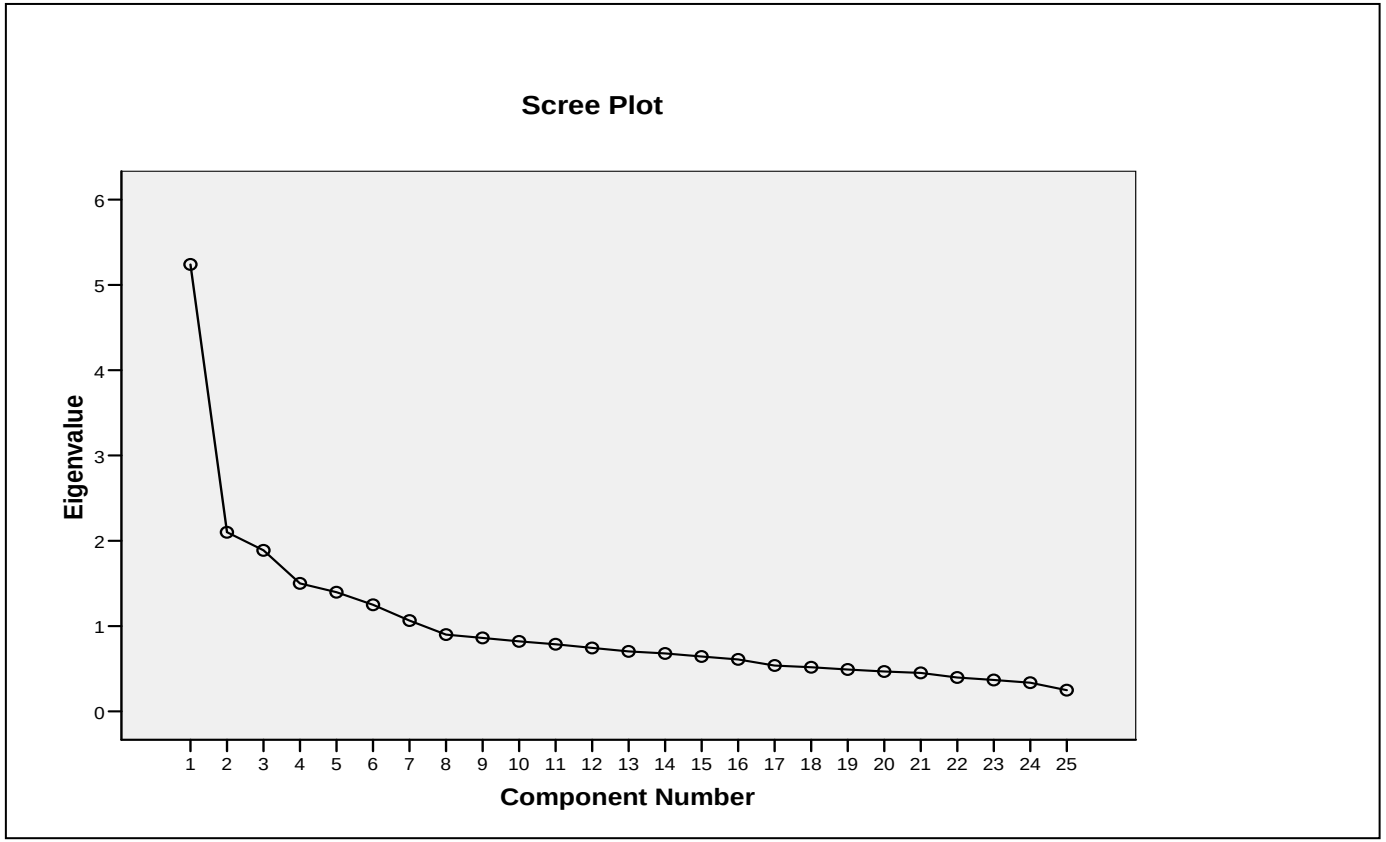
Table 79: Questions with a low correlation coefficient (subsequently deleted from the analysis)

Question number	Statement	Highest coefficient
2	Effective IT systems mean providing continuity of care for patients is no longer necessary.	0.214
3	It is better to have continuity of care than breadth of clinical expertise.	0.213
6	It is good medical practice to try and complete as many of the QOF targets as possible whilst you have the patient there, irrespective of why they came to see you.	0.242
8	All routine chronic disease management could be undertaken by an appropriately trained non medically qualified professional	0.253
9	A good health care professional runs to time and knows how to end a consultation when he/she feels it is appropriate.	-0.159
10	All our routine chronic disease management is undertaken by the practice nurses.	0.260
14	Having longer appointments does not necessarily increase a patient's health outcomes.	0.149
15	Delivery of complex care needs to a patient needs to be co-ordinated by a single individual. This does not need to be the GP.	0.288
16	Non medically qualified prescribers must take clinical responsibility for their prescribing decisions.	0.192
18	I like to give patients as much time as they feel they need even if it makes me run very late on my appointments.	-0.159
19	Getting maximum QOF points just means you are an organised practice.	0.202
21 (merged)	**Nurses / pharmacists only:** I don't want other nurses running chronic disease clinics for my patients because I like to have control over what my patients are doing. **GPs only:** I don't want nurses running chronic disease clinics for my patients because I like to have control over what my patients are doing	0.236
22	Nurses' skills should be used only for "routine" or "minor" problems	-0.232
23	It's better if patients have all their routine chronic disease management done by one person in a single visit (even if it covers >1clinical condition).	-0.296

Question number	Statement	Highest coefficient
24	Too much time is wasted having nurses/pharmacists hanging around just to get a prescription signed.	0.287
28	Even if a patient sees many health care professionals, the GPs should retain overall responsibility for their patients.	0.268
29	GPs' skills should be targeted to the "serious" or "difficult" problems such as patients with complex co-morbidities.	0.248
32	Continuity of care is more important for routine chronic disease management than it is for acute / symptomatic conditions.	0.166
33	Chronic disease management will always be a key role for GPs to ensure they remain in touch with the breadth of general practice.	0.268
37	It is better to base clinical decisions on an intuitive assessment of a patient's condition than to be driven by protocols.	-0.232
41	Risk management is difficult if you have no personal knowledge of the patient.	-0.233
42	It is easier to work as a locum because you are taking each patient's condition on face value without having to address any long standing psychosocial issues.	0.142
44 (merged)	**Nurses / pharmacists only**: It is not worth completing the non medical prescriber course when you can just print off the prescription and get the GP to sign it **GPs only:** It is not worth a nurse completing the non medical prescriber course when they can just print off the prescription and get the GP to sign it.	0.236
47	Measuring the patient's height, weight, blood pressure and peak flow, whether it is relevant to the condition or not, is a waste of time.	0.291
48	As healthcare becomes more complex safer clinical practice would suggest we need to have a team of people, with a range of skills, working effectively together.	0.288
50	NMPs should only prescribe if they adhere to protocols	0.246
52	If you offered routine chronic disease management at weekends you would have to have a GP present.	-0.204

Appendix 2.10: Scree plot

Figure 6: Scree plot showing the “elbows” (breaks in the plot) above which factors are retained



Appendix 2.11: Component Matrix for each of the 5 components

Table 80: Component Matrix for component 1 (strong loadings indicated by values >0.4)

Question Number	Load
Q40: There is no need to provide routine chronic disease management evenings / weekends	r0.596
Q34: One of the liberating aspects of recent changes in general practice is that you can specialise in an area that interests you	0.582
Q45: I like the structure that QOF provides because it is satisfying to know I have done everything I should for that patient	0.568
Q20: We should provide routine chronic disease clinics evenings and weekends even if it means establishing a rota of nurses to run them	0.554
Q31: Routine health monitoring, irrespective of the presenting condition, is important to the overall well-being and health of the patient	0.553
Q12: QOF is a good use of my time because by reviewing lists of patients I may identify someone who has “slipped through the net”	0.550
Q43: QOF is a good thing because it drives good patient-focused clinical care	0.544
Q26: Non medical prescribers save GPs’ time	0.500
Q49: The benefits of economies of scale, through practice mergers, outweigh any loss to continuity of care	0.494
Q1: Increasing surgery hours to include more evenings and weekends will not improve the overall health of the nation	r0.477
Q46: Friday to Monday is a long time for the general public to go without access to routine (not emergency) health care	0.475

Question Number	Load
Q5: The beauty of general practice is that you are a generalist. You don't have to specialise	r0.467
Q17: Nurses and doctors have overlapping skills that make it possible for one to substitute for the other in these areas	0.466
Q51: The time and energy spent obtaining QOF points is disproportionate to the patient benefits	r0.452
Q27: It is better to monitor each condition a patient has as a separate entity using appropriately trained specialists rather than trying to have one person who deals with everything	0.436
Q7: Non medical prescribers save patients' time because they are able to see a health care professional sooner	0.433
Q38: Having patients return for additional visits to see different specialists is better than having a one-stop shop because they get the best patient care possible	0.402
Q11: The problem with specialising is that you deal with a narrow spectrum of conditions which means your skills in other areas do not develop	r0.395
Q30: Non medically qualified prescribers are safer prescribers than doctors because they follow protocols better	0.384
Q36: I see QOF as guideline only and it does not constrain me as a health care professional	0.380
Q39: It is bad clinical practice for one GP to meet all the health care needs of a patient	0.371
Q25: QOF targets mean it is hard to focus on the patient's reason for coming to see you	r0.364

(use of "r" indicates "reverse" questions).

Table 81: Component Matrix for component 2 (strong loadings indicated by values >0.4)

Question Number	Load
Q25: QOF targets mean it is hard to focus on the patient's reason for coming to see you	0.615
Q51: The time and energy spent obtaining QOF points is disproportionate to the patient benefits	0.578
Q43: QOF is a good thing because it drives good patient-focused clinical care	r0.413
Q30: Non medically qualified prescribers are safer prescribers than doctors because they follow protocols better	0.412
Q12: QOF is a good use of my time because by reviewing lists of patients I may identify someone who has "slipped through the net"	r0.371
Q45: I like the structure that QOF provides because it is satisfying to know I have done everything I should for that patient	r0.368
Q36: I see QOF as guideline only and it does not constrain me as a health care professional	r0.366
Q26: Non medical prescribers save GPs' time	0.361
Q7: Non medical prescribers save patients' time because they are able to see a health care professional sooner	0.313

(Negatives indicate "reverse" questions).

Table 82: Component Matrix for component 3 (strong loadings indicated by values >0.4)

Question Number	**Load**
Q4: Providing continuity of care to an individual patient is more time efficient because you can figure out what is wrong with the patient more quickly	0.484
Q13: It is acceptable for GPs to endorse a nurse's / pharmacist's prescribing decision by signing the prescription without personally assessing the patient	0.478
Q7: Non medical prescribers save patients' time because they are able to see a health care professional sooner	0.459
Q5: The beauty of general practice is that you are a generalist. You don't have to specialise	0.419
Q17: Nurses and doctors have overlapping skills that make it possible for one to substitute for the other in these areas	0.419
Q35: You should only accept responsibility for signing an acute prescription if you have personally assessed the patient	r0.372
Q26: Non medical prescribers save GPs' time	0.342
Q40: There is no need to provide routine chronic disease management evenings / weekends	0.308

(Negatives indicate "reverse" questions)

Table 83: Component Matrix for component 4 (strong loadings indicated by values >0.4)

Question Number	Load
Q38: Having patients return for additional visits to see different specialists is better than having a one-stop shop because they get the best patient care possible	0.670
Q27: It is better to monitor each condition a patient has as a separate entity using appropriately trained specialists rather than trying to have one person who deals with everything	0.436
Q39: It is bad clinical practice for one GP to meet all the health care needs of a patient	0.399
Q40: There is no need to provide routine chronic disease management evenings / weekends	0.384
Q20: We should provide routine chronic disease clinics evenings and weekends even if it means establishing a rota of nurses to run them	r0.383
Q11: The problem with specialising is that you deal with a narrow spectrum of conditions which means your skills in other areas do not develop	r0.340

(Negatives indicate “reverse” questions).

Table 84: Component Matrix for component 5 (strong loadings indicated by values >0.4)

Question Number	**Load**
Q35: You should only accept responsibility for signing an acute prescription if you have personally assessed the patient	0.583
Q13: It is acceptable for GPs to endorse a nurse's / pharmacist's prescribing decision by signing the prescription without personally assessing the patient	r0.503
Q4: Providing continuity of care to an individual patient is more time efficient because you can figure out what is wrong with the patient more quickly	0.468
Q5: The beauty of general practice is that you are a generalist. You don't have to specialise	0.405

(Negatives indicate "reverse" questions)

Appendix 2.12: Questions loading negatively within a component grouping

Table 85: Questions loading negatively within a component grouping

Question Number	Question
Q1	Increasing surgery hours to include more evenings and weekends will not improve the overall health of the nation
Q7	Non medical prescribers save patients' time because they are able to see a health care professional sooner
Q11	The problem with specialising is that you deal with a narrow spectrum of conditions which means your skills in other areas do not develop
Q12	QOF is a good use of my time because by reviewing lists of patients I may identify someone who has "slipped through the net"
Q13	It is acceptable for GPs to endorse a nurse's / pharmacist's prescribing decision by signing the prescription without personally assessing the patient
Q17	Nurses and doctors have overlapping skills that make it possible for one to substitute for the other in these areas
Q26	Non medical prescribers save GPs' time
Q34	One of the liberating aspects of recent changes in general practice is that you can specialise in an area that interests you
Q36	I see QOF as guideline only and it does not constrain me as a health care professional
Q40	There is no need to provide routine chronic disease management evenings / weekends
Q43	QOF is a good thing because it drives good patient-focused clinical care
Q45	I like the structure that QOF provides because it is satisfying to know I have done everything I should for that patient

Appendix 2.13: Differences between GPs, Pharmacists and Nurses for each of the five components (C1 – C5)

Table 86: Differences between GPs, Pharmacists and Nurses for each of the five components (C1 – C5)

		GPs vs Nurses	GPs vs. Pharmacists	Nurses vs. Pharmacists
C1	**The extension of routine CDM clinics to include evenings and weekends**			
	Significance (p)	0.000	0.000	0.001
	Z-approximation	-9.119	-7.042	-3.301
	Number (N)	259	199	116
	r (Z/√N)	-0.6	-0.5	-0.3
	Effect	Large	Large	Medium
	Median - GP	31	-	-
	Median - Nurse	25.5	-	-
	Median – Pharm.	21.5	-	-
	Mean rank - GP	160.38	111.61	-
	Mean rank - nurse	70.97	-	64.30
	Mean rank – Pharm	-	29.11	40.29
	Comments	GPs more likely to disagree	GPs more likely to disagree	Nurses more likely to disagree
C2	**The usefulness of QOF in providing structure and improving the health of the nation**			
	Significance (p)	0.000	0.000	0.820
	Z-approximation	-5.083	-4.002	-0.228
	Number (N)	267	199	122
	r (Z/√N)	-0.3	-0.3	0.0
	Effect	Medium	Medium	Nil
	Median - GP	12	-	-
	Median - Nurse	10	-	-
	Median – Pharm.	10	-	-
	Mean rank - GP	151.74	106.43	-
	Mean rank - nurse	101.88	-	61.88
	Mean rank – Pharm	-	59.06	60.15
	Comments	GPs more likely to disagree	GPs more likely to disagree	Not statistically significant

Table 87: Differences between GPs, Pharmacists and Nurses for each of the 5 components (C1 – C5) (cont....)

C3	**Continuity of care saves time and the benefits of generalism**			
	Significance (p)	0.000	0.000	0.891
	Z-approximation	-5.970	-4.434	-0.228
	Number (N)	270	202	128
	r (Z/√N)	-0.4	-0.3	0.0
	Effect	Medium-lge	Medium	Nil
	Median - GP	6	-	-
	Median - Nurse	8	-	-
	Median – Pharm.	8	-	-
	Mean rank - GP	114.28	93.96	-
	Mean rank - nurse	172.75	-	64.26
	Mean rank – Pharm	-	144.72	65.30
	Comments	Nurses more likely to disagree	Pharmacists more likely to disagree	Not statistically significant
C4	**The need to monitor patients' conditions individually**			
	Significance (p)	0.000	0.000	0.171
	Z-approximation	-8.096	-3.946	-1.368
	Number (N)	266	201	123
	r (Z/√N)	-0.5	-0.3	-0.1
	Effect	Large	Medium	Small
	Median - GP	12	-	-
	Median - Nurse	9	-	-
	Median – Pharm.	10	-	-
	Mean rank - GP	161.45	107.56	-
	Mean rank - nurse	82.36	-	59.59
	Mean rank – Pharm	-	62.09	69.83
	Comments	GPs more likely to disagree	GPs more likely to disagree	Not statistically significant
C5	**The need to personally assess patients prior to issuing a prescription**			
	Significance (p)	0.007	0.016	0.668
	Z-approximation	-2.710	-2.401	-0.428
	Number (N)	268	202	126
	r (Z/√N)	-0.2	-0.2	0.0
	Effect	Small-Med.	Small-Med.	Nil
	Median - GP	7	-	-
	Median - Nurse	6	-	-
	Median – Pharm.	6	-	-
	Mean rank - GP	143.88	105.53	-
	Mean rank - nurse	117.70	-	64.27
	Mean rank – Pharm	-	78.40	61.05
	Comments	Not statistically significant	Not statistically significant	Not statistically significant

Appendix 2.14: Differences between GPs, NMPs and Non-Prescribers for components 4 and 5

Table 88: Differences between GPs, Non-medical Prescribers (NMPs – Pharmacists and Nurses who prescribe) and Non-Prescribers (both Pharmacists and Nurses) for components 4 and 5

		GPs vs NMPs	GPs vs. Non-prescribers	NMPs vs. Non-Prescribers
C4	**The benefits of specialising**			
	Significance (p)	0.000	0.000	0.002
	Z-approximation	-4.242	-8.553	-3.152
	Number (N)	203	244	105
	r (Z/√N)	-0.3	-0.6	-0.3
	Effect	Medium	Large	Medium
	Median - GP	12	-	-
	Median - NMP	10	-	-
	Median – non-prescribers	8	-	-
	Mean rank - GP	109.46	147.51	-
	Mean rank - NMP	62.13	-	66.98
	Mean rank – non-prescribers	-	63.91	46.87
	Comments	GPs more likely to disagree	GPs more likely to disagree	NMPs more likely to disagree
C5	**The need to personally assess patients prior to issuing a prescription**			
	Significance (p)	0.000	0.094	0.000
	Z-approximation	-4.691	-1.677	-3.741
	Number (N)	204	246	108
	r (Z/√N)	-0.3	-0.1	-0.4
	Effect	Medium	Small	Medium-lge.
	Median - GP	7	-	-
	Median - NMP	5	-	-
	Median – non-prescribers	6	-	-
	Mean rank - GP	110.83	128.42	-
	Mean rank - NMP	59.32	-	37.80
	Mean rank – non-prescribers	-	112.29	61.85
	Comments	GPs more likely to disagree	Not statistically significant	Non-prescribers more likely to disagree

Appendix 3 – Phase 3

Appendix 3.1: Ethics approval letter (phase 3)

NHS Bristol

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Bristol, BS1 3NX

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Mrs Nicola Mayes
University of Bath
Sanger House
5220 Valiant Way
Gloucester Business Park
Gloucester
GL3 4FE

Date 4 August 2009

Dear Nicola,

Time and Quality in Primary care
Reference: 2009/030

Thank you for your application to the Avon Primary Care Research Collaborative for Research Governance approval ('Trust approval') for your study.

We are pleased to inform you that NHS Bristol has approved your study and you can now start your work in this organisation.

This approval is granted on the understanding that the Chief Investigator will follow the requirements outlined in the Research Governance Framework for Health and Social Care, 2nd edition, 2005 and that the project is carried out according to Good Clinical Practice.

Any future changes to the study protocol will need to be approved by the relevant research ethics committee and our office also needs to be informed. Should this situation occur please send the amended protocol and the new ethics approval letter to us. If, beyond this, any serious adverse events occur during the study, please follow the standard procedures set up by the individual PCTs for dealing with these.

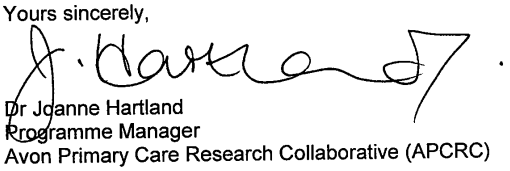
We are continually assessing the impact of the research being conducted in our area. On this basis we request that you provide us with regular project monitoring and outcome information. We will request this in simple format, when we need to report to bodies such as the Department of Health.

If you need any further support or information, please do not hesitate to contact us at the above address, quoting our reference number for your study

We wish you well with your study.

The Avon Primary Care Research Collaborative: working for NHS Bristol, NHS North Somerset and NHS South Gloucestershire

Yours sincerely,



Dr Joanne Hartland
Programme Manager
Avon Primary Care Research Collaborative (APCRC)

Telephone: 0117 984 1581
E-mail: jo.hartland@bristolpct.nhs.uk
Web: http://www.apcrc.nhs.uk

cc

Professor M Weiss (Academic Supervisor and Sponsor Contact)
Via e-mail prsmw@bath.ac.uk

Appendix 3.2: Ethics approval letter following major alteration submission (phase 3)

NHS
National Research Ethics Service
Bath Research Ethics Committee
c/o SW3 REC
Assembly Rooms
UHBristol Trust HQ
Marlborough St
Bristol
BS1 3NU

Tel: 0117 342 3613
Fax: 0117 323 2832

21 May 2010

Mrs Nicola Mayes
Pharmacist
NHS Gloucestershire - Care Services
Edward Jenner Court,
1010 Pioneer Ave.,
Gloucester Business Pk, Brockworth,
GL3 4FE

Dear Mrs Mayes

Study title:	**Relative Influences, of a range factors, on Patient's Service Preference: A discrete choice experiment (DCE)**
REC reference:	**09/H0101/76**
Amendment number:	**1**
Amendment date:	**04 May 2010**

The above amendment was reviewed at the meeting of the Sub-Committee held on 20 May 2010.

Ethical opinion

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Questionnaire: 3	2	04 May 2010
Questionnaire: 2	2	04 May 2010
Questionnaire: 1	2	04 May 2010
Notice of Substantial Amendment (non-CTIMPs)	1	04 May 2010

Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

R&D approval

National Research Ethics Service

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D approval of the research.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

09/H0101/76:	**Please quote this number on all correspondence**

Yours sincerely

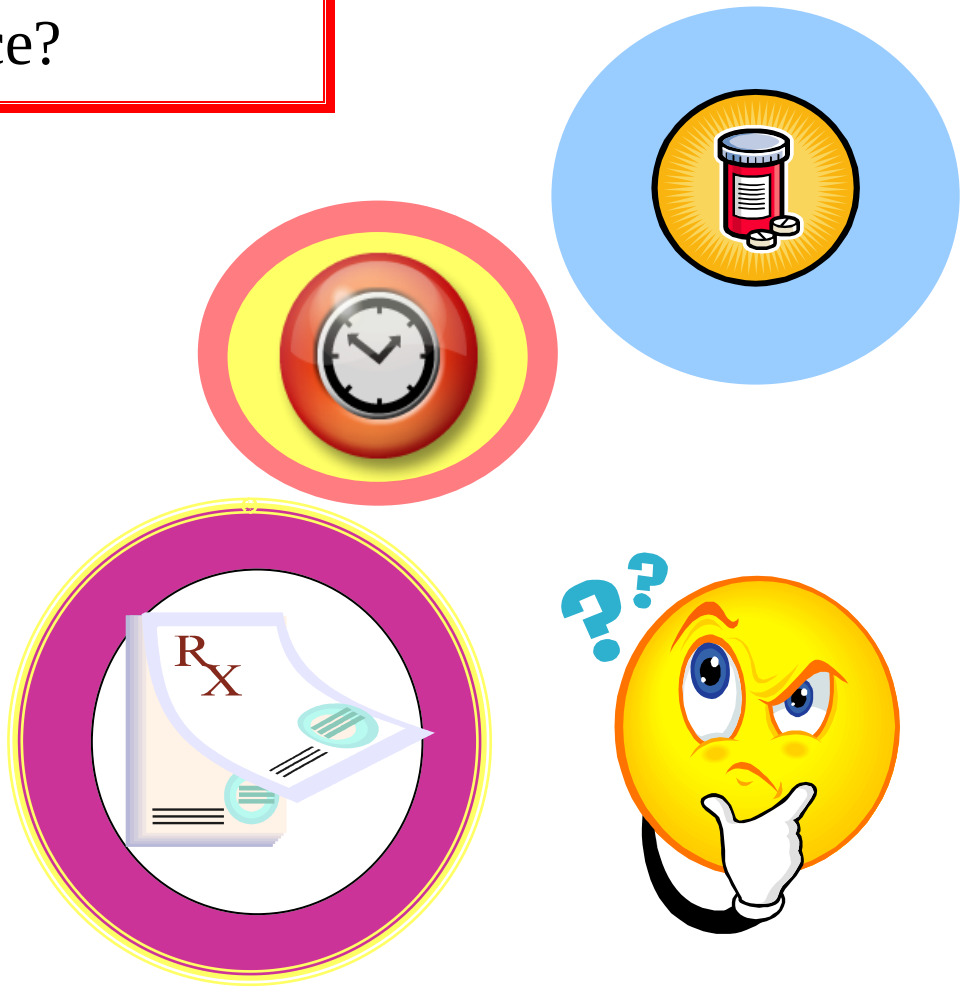
Mrs Naazneen Nathoo
Committee Co-ordinator

E-mail: Naaz.Nathoo@UHBristol.nhs.uk

Enclosures: *List of names and professions of members who took part in the review*

This Research Ethics Committee is an advisory committee to South West Strategic Health Authority
The National Research Ethics Service (NRES) represents the NRES Directorate within the National Patient Safety Agency and Research Ethics Committees in England

Consultations in Primary Care:
What is your preference?



Influences on Service Preference: PhD Pharmacy Research Project (N. Mayes)
Department of Pharmacy & Pharmacology
University of Bath, Bath BA2 7AY
Academic Supervisor: Professor Marjorie C Weiss
Email: m.weiss@bath.ac.uk; n.mayes@bath.ac.uk;
Telephone: 01225 386787 (Prof. M Weiss)

Patients' Preferences for NHS Primary Care Services

What is this survey about? This survey is about your preferences for how primary care services are provided by the local NHS. Your views are important to help us to learn how well primary care services work and how, you feel, they can be improved. The questionnaire uses data and ideas generated from a previous study.

Why have I been asked to take part in this study? We aim to recruit approximately 200 participants from the Gloucestershire area and the questionnaire is being handed out, by reception staff, to a random sample of patients. Your GP practice has agreed to help us hand out the questionnaires. As researchers we will not be able to identify to whom questionnaires have been handed.

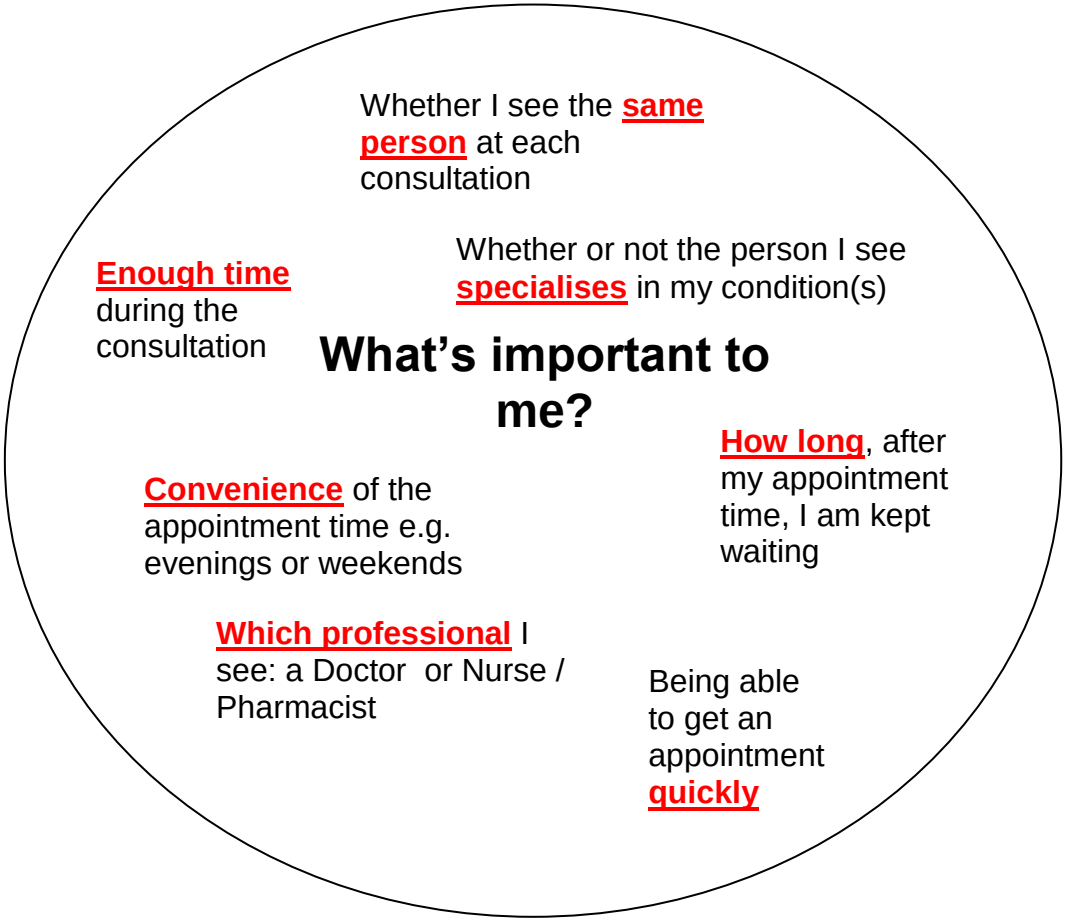
Who should complete the questionnaire? The questions should be answered by the person in whose name the appointment was made. If that person needs help to complete the questionnaire, the responses should be given from his/her point of view – not the point of view of the person who is helping. Those under 16 years of age are not included in this study and thus should not complete a questionnaire.

Completing the questionnaire - For each question please tick clearly inside one of the boxes (A or B) using a black or blue pen. Please remember there are no right or wrong answers. It is simply your preferences that we are interested in. Don't worry if you make a mistake; simply cross out the mistake and put a tick in the correct box. The questionnaire should take about 20 - 30minutes to complete. Please do not write your name or address anywhere on the questionnaire.

Questions or help? If you have any queries about the questionnaire, please call the telephone number given at the top of this sheet. If you would like feedback on the results of the study please let me know. It should be available from April 2010. Your participation in this survey is entirely voluntary. Non-participation will not affect the care you receive from the NHS in any way. If you do not wish to take part, or you do not want to answer some of the questions, you do not have to give a reason. Please return all completed questionnaires, in the enclosed FREEPOST envelope.

Your answers will be treated in confidence - All your responses will be confidential and anonymous. Neither you, nor your practice, will be identified by me now or at any time in the future. The research team will not know your details and will not be able to track you or obtain your details. Your practice will not know who has / has not responded.

Some things that happen in your consultation may be more important to you than others.



Please put the items in the circle in order of importance for you by writing them below **or** putting the number next to the statement. Start with the most important at the top (1):

Most important:

1. **……**
2. **……**
3. **……**
4. **……**
5. **……**
6. **……**
7. **……**

(Least important)

Your preferred consultation:

Please now think about how you would change your consultation with your practice if you could.
The following questions ask you to compare two consultations, A and B, and choose which you would prefer by ticking the box under either consultation A or consultation B. In each question only the details about consultation A change – consultation B is the same all the way through.

EXAMPLE

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A		**B**
A 10 minute appointment Today With a GP Whom you've never met before The GP is a generalist and hasn't done extra training in managing high blood pressure The appointment time is convenient for you You have to wait for one hour after your appointment time.	**OR**	A 20 minute appointment The day after tomorrow With a nurse (who can prescribe) Whom you've seen once or twice before The nurse has had some extra training in managing high blood pressure You need to change your plans to make the appointment You have to wait for 20 minutes after your appointment time.
☐		√

In this example consultation **B** was ticked because, on the whole, it was preferred to consultation **A**.

For each question (1 – 10) the same scenario is presented. Consultation B also remains the same but consultation A changes slightly each time. For each question please select the consultation you prefer, A or B, even if it is not your ideal consultation.

Q1 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A	**OR**	**B**
• A 10 minute appointment • Next week • With a pharmacist (who can prescribe) • Whom you've never met before • The pharmacist is a generalist and hasn't done extra training in managing high blood pressure • The appointment time isn't at all convenient for you • You have to wait for one hour after your appointment time.		• A 20 minute appointment • The day after tomorrow • With a nurse (who can prescribe) • Whom you've seen once or twice before • The nurse has had some extra training in managing high blood pressure • You need to change your plans to make the appointment • You have to wait for 20 minutes after your appointment time.
☐		☐

Q2 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 10 minute appointment
- Today
- With a nurse (who can prescribe)
- Whom you know well and usually see
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for one hour after your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
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Q3 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 10 minute appointment
- The day after tomorrow
- With a GP
- Whom you've seen once or twice before
- The GP has a special interest, and additional training, in the management of high blood pressure
- The appointment time is convenient for you
- You have to wait for one hour after your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q4 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 20 minute appointment
- Today
- With a pharmacist (who can prescribe)
- Whom you've never met before
- The pharmacist has a special interest, and additional training, in the management of high blood pressure
- The appointment time isn't at all convenient for you
- You are seen at your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q5 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

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- A 20 minute appointment
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- Whom you know well and usually see
- The nurse is a generalist and hasn't done extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You are seen at your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q6 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 20 minute appointment
- Next week
- With a GP
- Whom you've seen once or twice before
- The GP has had some extra training in managing high blood pressure
- The appointment time is convenient for you
- You are seen at your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q7 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 30 minute appointment
- Next week
- With a pharmacist (who can prescribe)
- Whom you've never met before
- The pharmacist has had some extra training in managing high blood pressure
- The appointment time is not at all convenient for you
- You have to wait for 20 minutes after your appointment time

☐

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

☐

Q8 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

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- A 30 minute appointment
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- With a nurse (who can prescribe)
- Whom you know well and usually see
- The nurse has a special interest, and additional training, in the management of high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

☐

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

☐

Q9 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 30 minute appointment
- Today
- With a GP
- Whom you've seen once or twice before
- The GP is a generalist and hasn't done extra training in managing high blood pressure
- The appointment time is convenient for you
- You have to wait for 20 minutes after your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q10 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

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☐

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

☐

And finally……..

Please would you tell us a bit about yourself for background information:

About you:

1. Are you male or female? ☐ Male ☐ Female

2. What was your **year** of birth? **(please write in) e.g** | 1 | 9 | 6 | 2 | | | | |

3. How old were you when you left full-time education?

☐ 16 years or less ☐ 17 or 18 years ☐ 19 years or over ☐ Still in full-time education

4. Do you work?

☐ Full-Time ☐ Part Time ☐ Retired

If you work part time, how many hours per week do you work? ……..…….hours

5. Do you suffer from any long-term health and / or chronic conditions (please tick all that apply)?

☐ None ☐ Heart problems (e.g. high blood pressure, angina)

☐ Diabetes ☐ Breathing problems (e.g. asthma, COPD)

☐ Bone / joint problems ☐ Stomach / Indigestion problems

☐ Depression

☐ Other (please list) ……

6. Do you take regular (every day) medication? ☐ Yes ☐ No

7. Do you take regular medication for any of the following (please tick all that apply)?

☐ None

☐ Heart problems (e.g. high blood pressure, angina)

☐ Diabetes

☐ Breathing problems (e.g. asthma, COPD)

☐ Bone / joint problems

☐ Stomach / Indigestion problems

☐ Depression

☐ Other (please list) ……..……..

8. Overall, how would you rate your health during the **past 4 weeks**?

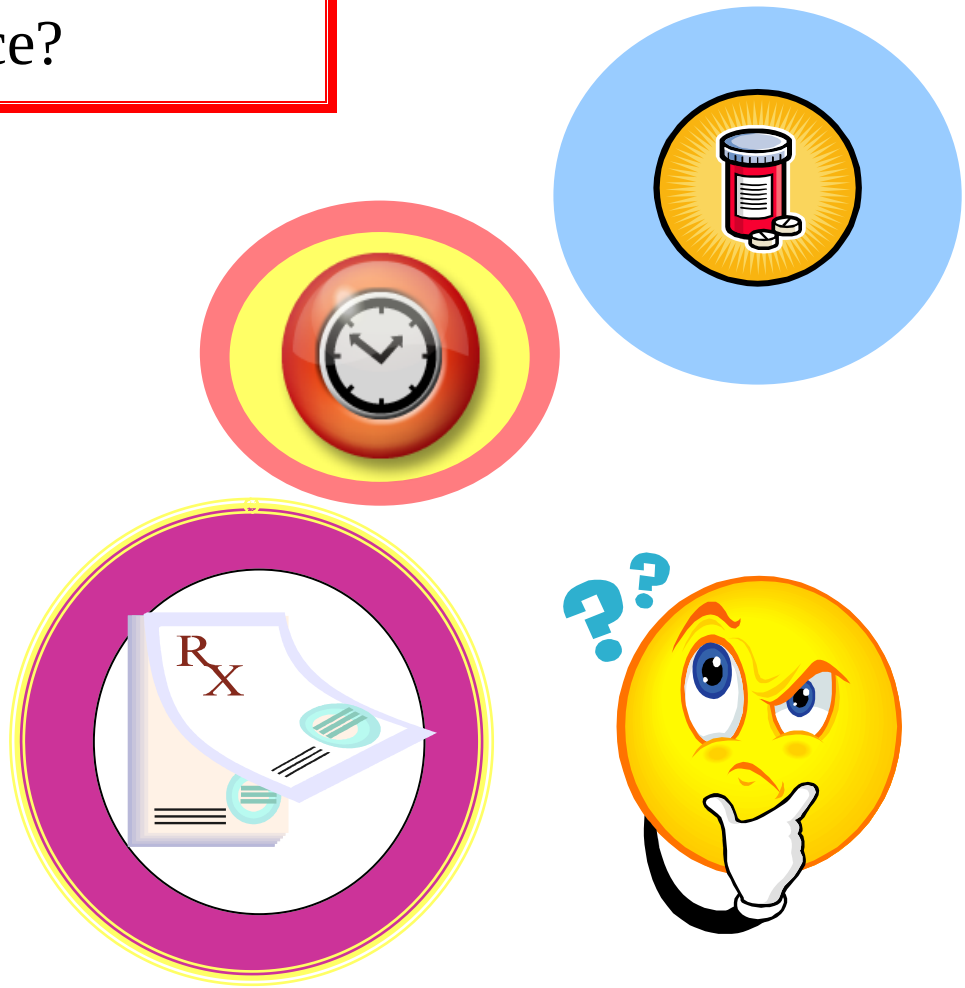
☐ Excellent ☐ Very good

☐ Good ☐ Fair

☐ Poor ☐ Very poor

Thank you for your time today. It is greatly appreciated.
Once you have completed the questionnaire please return it in the FREEPOST envelope provided

Consultations in Primary Care:
What is your preference?



Influences on Service Preference: PhD Pharmacy Research Project (N. Mayes)
Department of Pharmacy & Pharmacology
University of Bath, Bath BA2 7AY
Academic Supervisor: Professor Marjorie C Weiss
Email: m.weiss@bath.ac.uk; n.mayes@bath.ac.uk;
Telephone: 01225 386787 (Prof. M Weiss)

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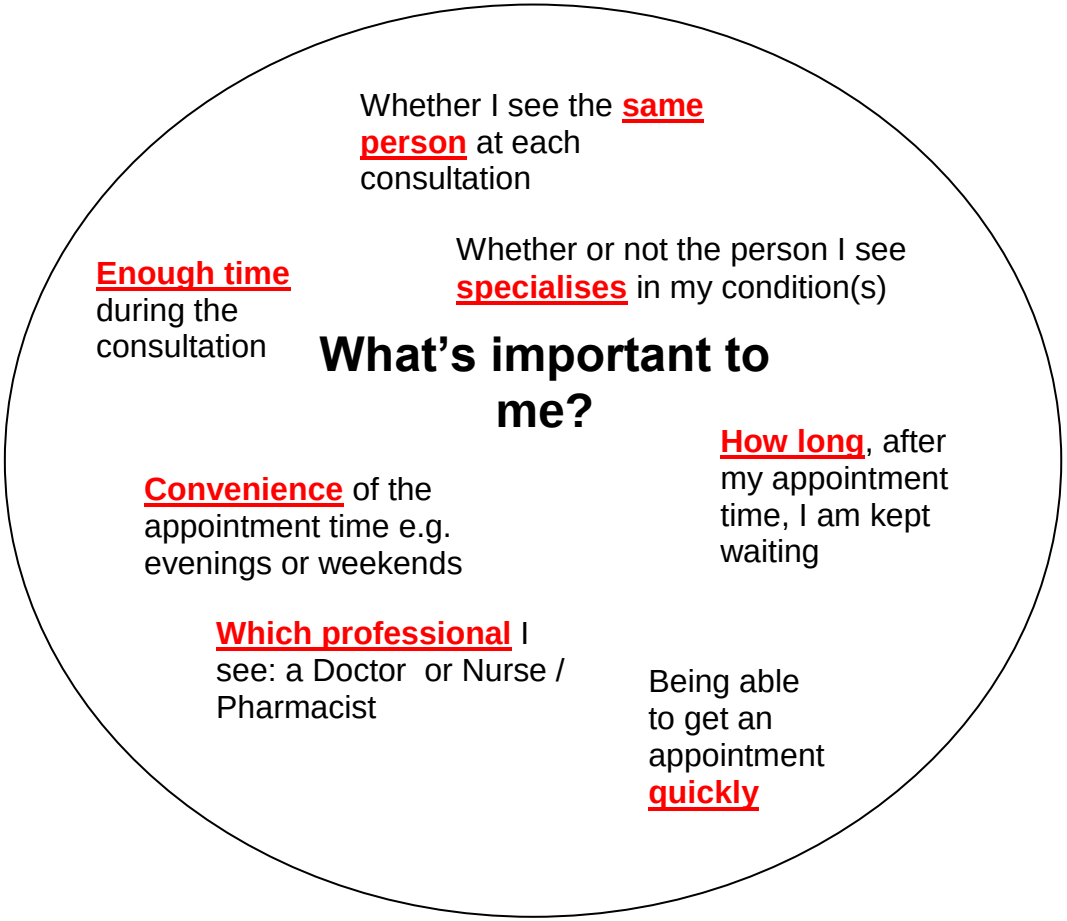

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Most important:

1……

2……

3……

4……

5……

6……

7……

(Least important)

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• A 10 minute appointment • Today • With a GP • Whom you've never met before • The GP is a generalist and hasn't done extra training in managing high blood pressure • The appointment time is convenient for you • You have to wait for one hour after your appointment time.	**OR**	• A 20 minute appointment • The day after tomorrow • With a nurse (who can prescribe) • Whom you've seen once or twice before • The nurse has had some extra training in managing high blood pressure • You need to change your plans to make the appointment • You have to wait for 20 minutes after your appointment time.
☐		☑

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☐		☐

Q2 Choose either consultation A or B by ticking one box

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OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q3 Choose either consultation A or B by ticking one box

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- A 10 minute appointment
- The day after tomorrow
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- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q4 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

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- The appointment time is convenient for you
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☐

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
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- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

☐

Q5 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

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- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- The appointment time isn't at all convenient for you
- You have to wait for one hour after your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
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Q6 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

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Q7 Choose either consultation A or B by ticking one box

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☐

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
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- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

☐

Q8 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 30 minute appointment
- Next week
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse is a generalist and hasn't done extra training in managing high blood pressure
- The appointment time isn't at all convenient for you
- You are seen at your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q9 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 30 minute appointment
- Today
- With a GP
- Whom you've never met before
- The GP has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You are seen at your appointment time

☐

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20minutes after your appointment time

☐

Q10 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 30 minute appointment
- The day after tomorrow
- With a pharmacist (who can prescribe)
- Whom you know well and usually see
- The pharmacist has a special interest, and additional training, in the management of high blood pressure
- The appointment time is convenient for you
- You are seen at your appointment time

☐

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

☐

Q11 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 30 minute appointment
- Today
- With a GP
- Whom you know well and usually see
- The GP has a special interest, and additional training, in the management of high blood pressure
- The appointment time is convenient for you
- You are seen at your appointment time

☐

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20minutes after your appointment time

☐

And finally……

Please would you tell us a bit about yourself for background information:

About you:

1. Are you male or female? ☐ Male ☐ Female

2. What was your **year** of birth? **(please write in) e.g** 1 9 6 2 ☐☐☐☐

3. How old were you when you left full-time education?

   ☐ 16 years or less ☐ 17 or 18 years ☐ 19 years or over ☐ Still in full-time education

4. Do you work?

   ☐ Full-Time ☐ Part Time ☐ Retired

If you work part time, how many hours per week do you work? ……..…….hours

5. Do you suffer from any long-term health and / or chronic conditions (please tick all that apply)?

   ☐ None ☐ Heart problems (e.g. high blood pressure, angina)

   ☐ Diabetes ☐ Breathing problems (e.g. asthma, COPD)

☐ Bone / joint problems ☐ Stomach / Indigestion problems

☐ Depression

☐ Other (please list) ……

6. Do you take regular (every day) medication? ☐ Yes ☐ No

7. Do you take regular medication for any of the following (please tick all that apply)?

☐ None

☐ Heart problems (e.g. high blood pressure, angina)

☐ Diabetes

☐ Breathing problems (e.g. asthma, COPD)

☐ Bone / joint problems

☐ Stomach / Indigestion problems

☐ Depression

☐ Other (please list) ……..……..

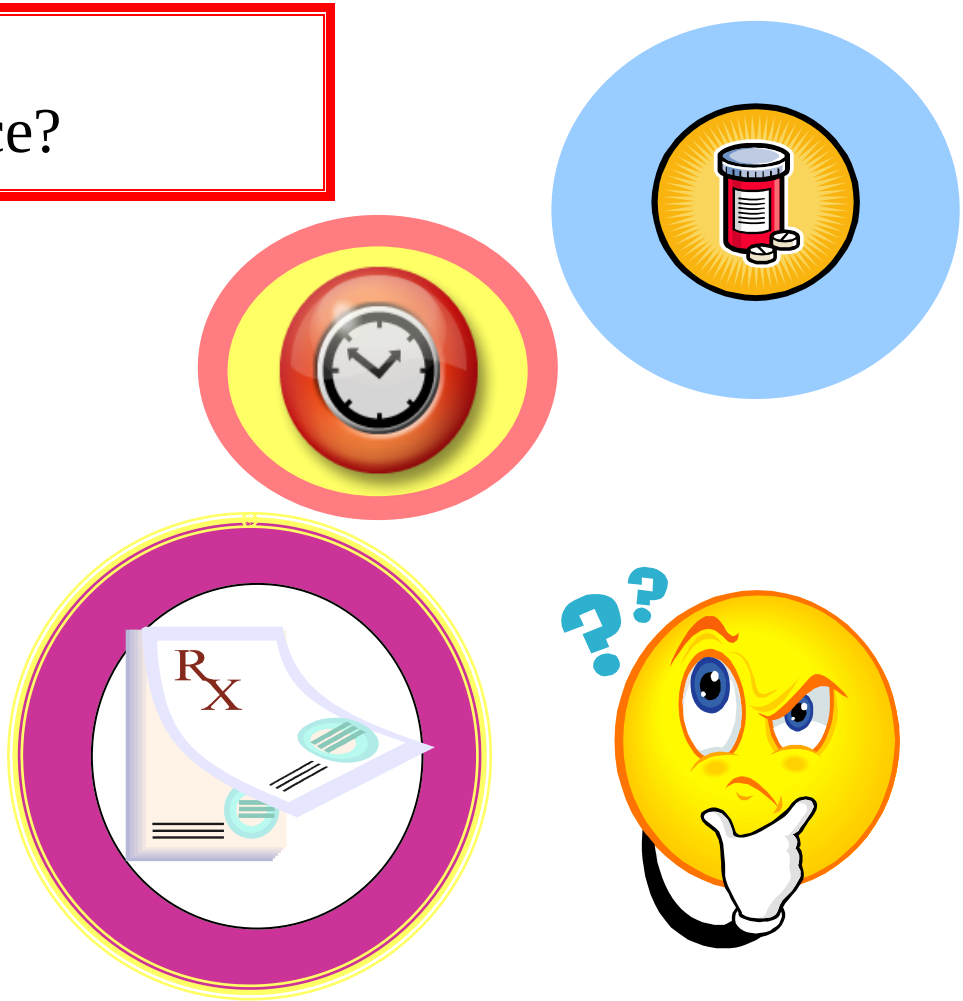
8. Overall, how would you rate your health during the **past 4 weeks**?

☐ Excellent	☐ Very good
☐ Good	☐ Fair
☐ Poor	☐ Very poor

Thank you for your time today. It is greatly appreciated.

Once you have completed the questionnaire please return it in the FREEPOST envelope provided

Consultations in Primary Care:
What is your preference?



Gloucestershire NHS
Primary Care Trust

Influences on Service Preference: PhD Pharmacy Research Project (N. Mayes)
Department of Pharmacy & Pharmacology
University of Bath, Bath BA2 7AY
Academic Supervisor: Professor Marjorie C Weiss
Email: m.weiss@bath.ac.uk; n.mayes@bath.ac.uk;
Telephone: 01225 386787 (Prof. M Weiss)

Patients' Preferences for NHS Primary Care Services

What is this survey about? This survey is about your preferences for how primary care services are provided by the local NHS. Your views are important to help us to learn how well primary care services work and how, you feel, they can be improved. The questionnaire uses data and ideas generated from a previous study.

Why have I been asked to take part in this study? We aim to recruit approximately 200 participants from the Gloucestershire area and the questionnaire is being handed out, by reception staff, to a random sample of patients. Your GP practice has agreed to help us hand out the questionnaires. As researchers we will not be able to identify to whom questionnaires have been handed.

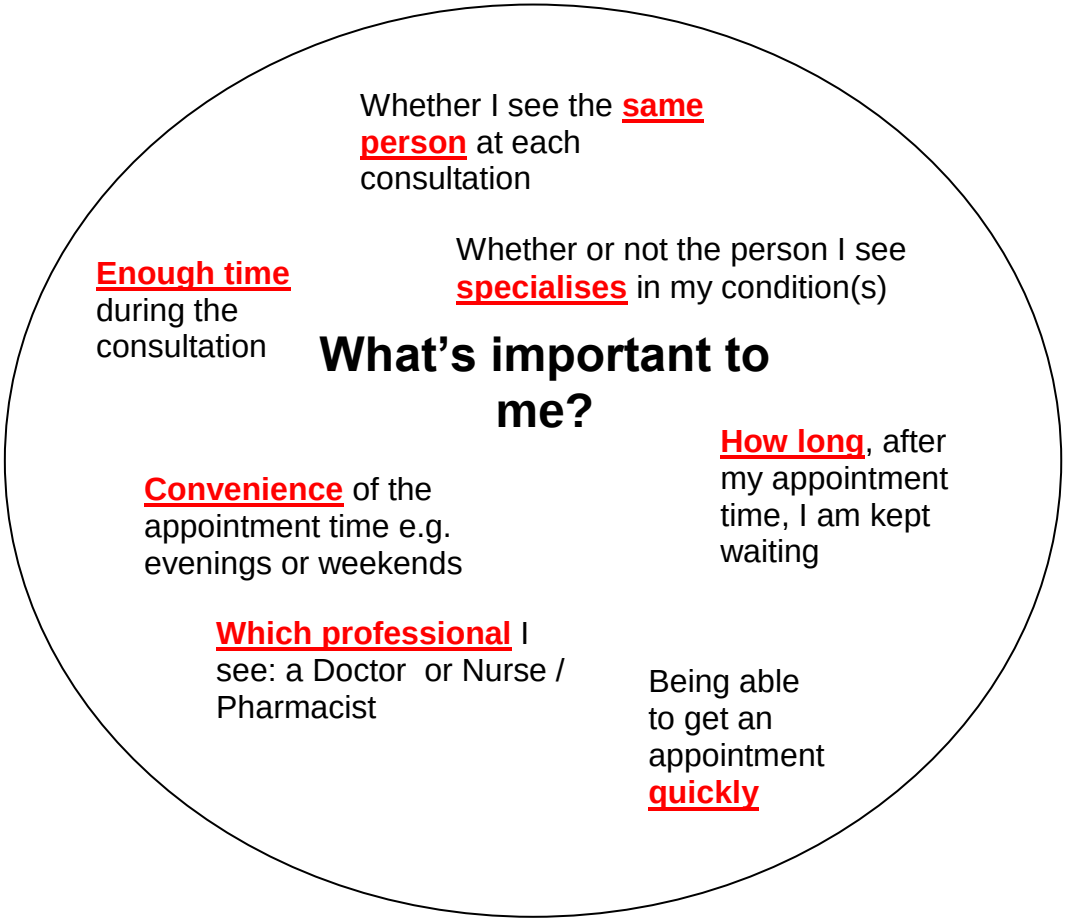
Who should complete the questionnaire? The questions should be answered by the person in whose name the appointment was made. If that person needs help to complete the questionnaire, the responses should be given from his/her point of view – not the point of view of the person who is helping. Those under 16 years of age are not included in this study and thus should not complete a questionnaire.

Completing the questionnaire - For each question please tick clearly inside one of the boxes (A or B) using a black or blue pen. Please remember there are no right or wrong answers. It is simply your preferences that we are interested in. Don't worry if you make a mistake; simply cross out the mistake and put a tick in the correct box. The questionnaire should take about 20 - 30minutes to complete. Please do not write your name or address anywhere on the questionnaire.

Questions or help? If you have any queries about the questionnaire, please call the telephone number given at the top of this sheet. If you would like feedback on the results of the study please let me know. It should be available from April 2010. Your participation in this survey is entirely voluntary. Non-participation will not affect the care you receive from the NHS in any way. If you do not wish to take part, or you do not want to answer some of the questions, you do not have to give a reason. Please return all completed questionnaires, in the enclosed FREEPOST envelope.

Your answers will be treated in confidence - All your responses will be confidential and anonymous. Neither you, nor your practice, will be identified by me now or at any time in the future. The research team will not know your details and will not be able to track you or obtain your details. Your practice will not know who has / has not responded.

Some things that happen in your consultation may be more important to you than others.



Please put the items in the circle in order of importance for you by writing them below **or** putting the number next to the statement. Start with the most important at the top (1):

Most important:

1……

2……

3……

4……

5……

6……

7……

(Least important)

Your preferred consultation:

Please now think about how you would change your consultation with your practice if you could.

The following questions ask you to compare two consultations, A and B, and choose which you would prefer by ticking the box under either consultation A or consultation B. In each question only the details about consultation A change – consultation B is the same all the way through.

EXAMPLE

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A		**B**
• A 10 minute appointment • Today • With a GP • Whom you've never met before • The GP is a generalist and hasn't done extra training in managing high blood pressure • The appointment time is convenient for you • You have to wait for one hour after your appointment time.	**OR**	• A 20 minute appointment • The day after tomorrow • With a nurse (who can prescribe) • Whom you've seen once or twice before • The nurse has had some extra training in managing high blood pressure • You need to change your plans to make the appointment • You have to wait for 20 minutes after your appointment time.
☐		☑

In this example consultation **B** was ticked because, on the whole, it was preferred to consultation **A**.

For each question (1 – 11) the same scenario is presented. Consultation B also remains the same but consultation A changes slightly each time. For each question please select the consultation you prefer, A or B, even if it is not your ideal consultation.

Q1 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 10 minute appointment
- Next week
- With a pharmacist (who can prescribe)
- Whom you've never met before
- The pharmacist is a generalist and hasn't done extra training in managing high blood pressure
- The appointment time isn't at all convenient for you
- You have to wait for one hour after your appointment time

☐

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

☐

Q2 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 10 minute appointment
- The day after tomorrow
- With a GP
- Whom you know well and usually see
- The GP has had some extra training in managing high blood pressure
- The appointment time isn't at all convenient for you
- You are seen at your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q3 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 10 minute appointment
- Next week
- With a pharmacist (who can prescribe)
- Whom you've seen once or twice before
- The pharmacist has a special interest, and additional training, in the management of high blood pressure
- You need to change your plans to make the appointment
- You are seen at your appointment time

☐

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

☐

Q4 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 10 minute appointment
- Today
- With a nurse (who can prescribe)
- Whom you've never met before
- The nurse is a generalist and hasn't done extra training in managing high blood pressure
- The appointment time is convenient for you
- You are seen at your appointment time

☐

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

☐

Q5 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 20 minute appointment
- Next week
- With a GP
- Whom you know well and usually see
- The GP is a generalist and hasn't done extra training in managing high blood pressure
- The appointment time isn't at all convenient for you
- You have to wait for 20 minutes after your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q6 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 20 minute appointment
- Today
- With a pharmacist (who can prescribe)
- Whom you've seen once or twice before
- The pharmacist has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q7 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've never met before
- The nurse has a special interest, and additional training, in the management of high blood pressure
- The appointment time is convenient for you
- You have to wait for 20 minutes after your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q8 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 30 minute appointment
- Today
- With a GP
- Whom you know well and usually see
- The GP has a special interest, and additional training, in the management of high blood pressure
- The appointment time isn't at all convenient for you
- You have to wait for one hour after your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q9 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 30 minute appointment
- The day after tomorrow
- With a pharmacist (who can prescribe)
- Whom you've seen once or twice before
- The pharmacist is a generalist and hasn't done extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for one hour after your appointment time

☐

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

☐

Q10 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 30 minute appointment
- Next week
- With a nurse (who can prescribe)
- Whom you've never met before
- The nurse has had some extra training in managing high blood pressure
- The appointment time is convenient for you
- You have to wait for one hour after your appointment time

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

Q11 Choose either consultation A or B by ticking one box

You have recently been started on a medicine for high blood pressure and you have started getting headaches. This worries you and you would like to see someone about it. Below are listed 2 visit types, would you prefer visit **A** or visit **B**?

A

- A 30 minute appointment
- Today
- With a GP
- Whom you know well and usually see
- The GP has a special interest, and additional training, in the management of high blood pressure
- The appointment time is convenient for you
- You are seen at your appointment time

☐

OR

B

- A 20 minute appointment
- The day after tomorrow
- With a nurse (who can prescribe)
- Whom you've seen once or twice before
- The nurse has had some extra training in managing high blood pressure
- You need to change your plans to make the appointment
- You have to wait for 20 minutes after your appointment time

☐

And finally……..

Please would you tell us a bit about yourself for background information:

About you:

1. Are you male or female? ☐ Male ☐ Female

2. What was your **year** of birth? **(please write in) e.g** 1 9 6 2 ☐☐☐☐

3. How old were you when you left full-time education?

☐ 16 years or less ☐ 17 or 18 years ☐ 19 years or over ☐ Still in full-time education

4. Do you work?

☐ Full-Time ☐ Part Time ☐ Retired

If you work part time, how many hours per week do you work? ……..…….hours

5. Do you suffer from any long-term health and / or chronic conditions (please tick all that apply)?

- ☐ None
- ☐ Heart problems (e.g. high blood pressure, angina)
- ☐ Diabetes
- ☐ Breathing problems (e.g. asthma, COPD)
- ☐ Bone / joint problems
- ☐ Stomach / Indigestion problems
- ☐ Depression
- ☐ Other (please list) ……

6. Do you take regular (every day) medication? ☐ Yes ☐ No

7. Do you take regular medication for any of the following (please tick all that apply)?

- ☐ None
- ☐ Heart problems (e.g. high blood pressure, angina)
- ☐ Diabetes

☐ Breathing problems (e.g. asthma, COPD)

☐ Bone / joint problems

☐ Stomach / Indigestion problems

☐ Depression

☐ Other (please list) ……..……..

8. Overall, how would you rate your health during the **past 4 weeks**?

☐ Excellent ☐ Very good

☐ Good ☐ Fair

☐ Poor ☐ Very poor

Thank you for your time today. It is greatly appreciated.

Once you have completed the questionnaire please return it in the FREEPOST envelope provided

Appendix 3.6: Practice letter for patient recruitment

Gloucestershire NHS
Primary Care Trust

Influences on Service Preference: PhD Pharmacy Research Project (N. Mayes)
Department of Pharmacy & Pharmacology
University of Bath
Bath BA2 7AY
Academic Supervisor: Professor Marjorie C Weiss
Email: m.weiss@bath.ac.uk; n.mayes@bath.ac.uk;
Telephone: 01225 386787

(Date)

Dear (practice manager),

RE: An Investigation into the influences, of a range of factors, on patient's service preference: A PhD Research Project

I am writing to ask for your help with a research project exploring what factors influence patients service preference. The project is being conducted as part of a PhD study at the University of Bath. The aim of the project is to investigate the relative importance patients apply to a range of factors when expressing a preference for how primary care services are delivered.

I would be grateful if a member of your reception staff could prospectively hand out questionnaires to approximately 20 patients who arrive, consecutively at the practice, for an appointment with the GP, nurse or pharmacist. The researchers will not know who was / was not handed questionnaires and there will be no follow-up of patients. Each questionnaire will be accompanied by a FREEPOST envelope for return of the questionnaire. It has been estimated that the questionnaire will take approximately 30 minutes to complete and may be completed at the patient's convenience. In accordance with ethical approval all under 16's and any patient, the practice feel, is distressed or confused should be excluded from the study and NOT handed a questionnaire to complete. These are the only exemptions.

I have enclosed a copy of the questionnaire for your information. If you would like further information please feel free to contact me.

I would be grateful if you could confirm in writing, either via a letter or email (to either the address above or nicola.mayes@glos.nhs.uk) your willingness, or not, to participate in this project.

Many thanks for your help and for taking the time to read this.

Yours sincerely,

Nikki Mayes
Pharmacist, NHS Gloucestershire – Care Services

Appendix 3.7: Dummy variable coding

Table 89: Dummy variables

Utility level	**Consultation_duration$_{30}$**	**Consultation_duration$_{20}$**
High – 30mins	1	0
Med – 20mins	0	1
Low – 10mins	0	0
	Waiting_time$_{on_time}$	**Waiting_time$_{20mins}$**
High – on time	1	0
Med – 20mins wait	0	1
Low – 60min	0	0
	Appointment_time$_{conven.}$	**Appointment$_{_timemildly_inconven.}$**
High – conven.	1	0
Med – mildly incoven.	0	1
Low–inconven.	0	0
	Type_professional$_{GP}$	**Type_professional$_{Nurse}$**
High – GP	1	0
Med – nurse	0	1
Low – Pharmacist	0	0
	Continuity_Care$_{usual}$	**Continuity_Care$_{seen_once/twice}$**
High - usual	1	0
Med – seen once or twice	0	1
	0	0
	Specialist_Care$_{specialist}$	**Specialist_Care$_{some_training}$**
High -specialist	1	0
Med – some training	0	1
Low -generalist	0	0
	Promptness_Appoint.$_{today}$	**Promptness_Appoint.$_{48hours}$**
High - today	1	0
Med – 48hrs	0	1
Low – 1week	0	0

Table 90: Dummy Variable coding: Questionnaire version 1

	Consultation duration			Waiting time after appoint.			Convenience or not of appoint.			Type of professional			Continuity of care			Specialist vs. generalist			Promptness of appoitment		
	10m	20m	30m	60m	20m	0m	Not	Mild	OK	Ph.	Nurse	GP	never	Occ.	usual	Gen.	some	Spec.	1wk	48h	today
Utility:	**0**	**1**	**2**	**0**	**1**	**2**	**0**	**1**	**2**	**0**	**1**	**2**	**0**	**1**	**2**	**0**	**1**	**2**	**0**	**1**	**2**
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	1	1	0	1	1	0	2	0	1	1	1	0	2	0	1
3	0	0	0	0	0	0	2	0	1	2	0	1	1	1	0	2	0	1	1	1	0
4	1	1	0	2	0	1	0	0	0	0	0	0	0	0	0	2	0	1	2	0	1
5	1	1	0	2	0	1	1	1	0	1	1	0	2	0	1	0	0	0	1	1	0
6	1	1	0	2	0	1	2	0	1	2	0	1	1	1	0	1	1	0	0	0	0
7	2	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
8	2	0	1	1	1	0	1	1	0	1	1	0	2	0	1	2	0	1	0	0	0
9	2	0	1	1	1	0	2	0	1	2	0	1	1	1	0	0	0	0	2	0	1
10	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1

Table 91: Dummy Variable coding: Questionnaire version 2

	Consultation duration			Waiting time after appoint.			Convenience or not of appoint.			Type of professional			Continuity of care			Specialist vs. generalist			Promptness of appointment		
	10m	20m	30m	60m	20m	0m	Not	Mild	OK	Ph.	Nurse	GP	never	Occ.	usual	Gen.	some	Spec.	1wk	48h	Today
Utility:	0	1	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1	2
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	1	1	0	0	0	0	1	1	0	1	1	0	2	0	1	2	0	1
3	0	0	0	1	1	0	1	1	0	2	0	1	0	0	0	0	0	0	1	1	0
4	0	0	0	1	1	0	2	0	1	0	0	0	2	0	1	1	1	0	0	0	0
5	1	1	0	0	0	0	0	0	0	1	1	0	1	1	0	1	1	0	1	1	0
6	1	1	0	0	0	0	1	1	0	2	0	1	0	0	0	2	0	1	1	1	0
7	1	1	0	0	0	0	2	0	1	0	0	0	2	0	1	0	0	0	2	0	1
8	2	0	1	2	0	1	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0
9	2	0	1	2	0	1	1	1	0	2	0	1	0	0	0	1	1	0	2	0	1
10	2	0	1	2	0	1	2	0	1	0	0	0	2	0	1	2	0	1	1	1	0
11	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1

Table 92: Dummy Variable coding: Questionnaire version 3

	Consultation duration			Waiting time after appoint.			Convenience or not of appoint.			Type of professional			Continuity of care			Specialist vs. generalist			Promptness of appoitment		
	10m	20m	30m	60m	20m	0m	Not	Mild	OK	Ph.	Nurse	GP	never	Occ.	usual	Gen.	some	Spec.	1wk	48h	today
Utility:	**0**	**1**	**2**	**0**	**1**	**2**	**0**	**1**	**2**	**0**	**1**	**2**	**0**	**1**	**2**	**0**	**1**	**2**	**0**	**1**	**2**
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	2	0	1	0	0	0	2	0	1	2	0	1	1	1	0	1	1	0
3	0	0	0	2	0	1	1	1	0	0	0	0	1	1	0	2	0	1	0	0	0
4	0	0	0	2	0	1	2	0	1	1	1	0	0	0	0	0	0	0	2	0	1
5	1	1	0	1	1	0	0	0	0	2	0	1	2	0	1	0	0	0	0	0	0
6	1	1	0	1	1	0	1	1	0	0	0	0	1	1	0	1	1	0	2	0	1
7	1	1	0	1	1	0	2	0	1	1	1	0	0	0	0	2	0	1	1	1	0
8	2	0	1	0	0	0	0	0	0	2	0	1	2	0	1	2	0	1	2	0	1
9	2	0	1	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	1	1	0
10	2	0	1	0	0	0	2	0	1	1	1	0	0	0	0	1	1	0	0	0	0
11	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1	2	0	1